

Santa Clara County California



Its Climate, Resources and Industries

Third Edition

REVISED BY

THE SAN JOSE CHAMBER OF COMMERCE

FOR THE

COUNTY BOARD OF SUPERVISORS



FOREWORD



THIS is an agricultural, horticultural and industrial survey of Santa Clara County, California, officially compiled and revised by the San Jose Chamber of Commerce for the County Board of Supervisors. Two editions of the booklet have been exhausted, and in the present edition pains have been taken to state land values, cost of operating the various kinds of orchards, prices to the grower for his orchard products, etc., accurately as conditions exist today. It is believed that these conditions, so far as the fruit industry is concerned, are about normal and that the figures herein contained may reasonably be accepted as a conservative and safe basis upon which the prospective orchardist may make his estimates of present and future profits. All branches of the fruit industry in this Valley and throughout California are well organized, and the fruit grower is safeguarded by the use of business principles and methods such as characterize all modern commercial and manufactural enterprises, and fruit growing ranks with them in dignity and importance and in certainty of satisfactory returns on judicious investment and intelligent management.

This booklet contains reliable and unbiased information concerning the climate, soils, rainfall, crops, industries, manufactures, educational facilities, roads and other features of Santa Clara County, and a sufficient outline of every district, city and town in the county to enable the distant enquirer or newcomer to form a fairly accurate conception of the situation, productions and advantages of each. Every city and almost every town in the valley has either a Chamber of Commerce or an Improvement Club, a complete list of which may be found on page 69 of this booklet, and further information concerning the Valley will be gladly given by any of them.

BOARD OF SUPERVISORS,
Santa Clara County, California

Santa Clara County Agricultural Survey

INTRODUCTION

Santa Clara Valley, beginning 30 miles southerly from San Francisco, and extending 60 miles with an average width of 20 miles, is noted for the quantity, variety and excellence of its soil and orchard productions. The county itself comprises an area of 1,328 square miles, or approximately 867,000 acres, and it covers the larger portion of the valley, which lies between the Santa Cruz mountains, separating it from the coast, and the Mt. Hamilton range on the east, beyond which is the great San Joaquin Valley. It is thus protected from the coast fogs on the one hand and the summer heat of interior California on the other, and another modifying influence is San Francisco Bay, the southern arm of which projects for some distance into the northern end of the valley. This topography explains the equability and salubrity of the climate and the wide range of soil products it is possible to grow here, embracing all varieties of fruits, berries and vegetables except those of tropical nature. The trade winds, modified to a gentle breeze by their passage up the bay, tend to keep down the summer temperature, and the proximity of the bay waters greatly modifies the winter cold. The rainfall ranges from 16 inches at the lowest point to 30 and more at the foothills and from 40 to 50 inches at the summits.

There are in the county approximately 115,000 acres of orchards of cherries, apricots, prunes, peaches, pears, apples, plums, walnuts, almonds, and vineyards. These with flower and vegetable seed farms, berry farms, poultry ranches, purebred cattle farms, beef cattle ranges, dairies, thoroughbred stock farms, farms of early table and canning vegetables, sugar beet farms, and general farms of hay, grain and alfalfa, present a variety of agricultural industries such as can be found probably in no other section of similar area in the world. As early as 1777 the Franciscan Fathers, who because of its evident fertility of soil, mildness of climate and beauty of natural surroundings, selected this valley as a site for one of their Missions—Santa Clara—planted grapes, figs, pears, olives and other fruits, sent hither from Mexico and Spain, and these were the beginning of the present vast local orchard industry. One-third of the world's prunes are grown in this valley, and the 40 fruit canneries in the county turn out approximately one-third of California's canned fruit products.

As will be seen by the data given on page 49, Santa Clara County ranks well in the manufacturing industries, and in this respect it is steadily growing, due to its advantages of climate, cheaper cost of living, low freight rates and convenience of transportation.

One of the greatest quicksilver mines in the world is in Santa Clara County, and this and the contiguous county of San Benito have produced more quicksilver than all other quicksilver mines in the United States combined. Magnesite, fine building stone and paraffine base oil are other mineral products of this county.

All in all, Santa Clara Valley, "one of the three most beautiful valleys in the world," has no superior anywhere for either productive or residential purposes, and the reader of this booklet will find information concerning it that is conservative, dependable and enlightening.

CLIMATE OF THE SANTA CLARA VALLEY, CALIFORNIA

By E. S. NICHOLS, Meteorologist,
(In charge U. S. Weather Bureau Office, San Jose)

The climate of Santa Clara County is marked by a rainy and a dry season. The summer months, June, July, and August, are nearly rainless and receive an average of from 80 to 85% of the possible sunshine, as shown by records at San Jose. By far the most of the precipitation occurs between November 1 and March 31, during which period there is considerable cloudiness and rains are frequent. But even then sunshine at San Jose averages 60%, and the rain usually falls gently, so that the amount of run-off is comparatively slight. September, October, April, and May are transition months, when the character of weather is changing from one type to the other.

As might be expected from the topography, the depth of rainfall varies considerably throughout the County. The least annual amount, 16 or 17 inches, falls on the floor of the Santa Clara Valley—illustrated by records at San Jose, Campbell, and Santa Clara. With ascent of the foothills, particularly to the westward, precipitation increases. Los Gatos station, at an elevation of about 600 feet on the west side, and Lick Observatory at about 4,200 feet above sea level on the east, have about double the amount that falls at the lower levels. Precipitation is greater, also, in the southern part of the county, as shown by the record at Gilroy—about 20 inches per year.

Snow never lies on the floor of the Valley, and its occurrence in the foothills is rare. Fogs sometimes occur, and "high fogs" are not uncommon in the morning; however they are usually dissipated early in the day. Light thunder is heard at San Jose on an average of two days in three years; but well-developed thunderstorms, such as occur in some parts of the United States, are unknown. Severe and very destructive wind-storms do not occur.

The average wind velocity at San Jose is about 6 miles per hour. It is very light during the night. With the warming of the land, particularly on clear summer mornings, the wind freshens and blows from San Francisco Bay over the land. Thus the air on summer days that would otherwise be hot and dessicating is cooled and its humidity is increased, to the benefit of vegetation and the comfort of the inhabitants. On the other hand, during cold spells of winter and spring, the imported cold air from the north and northwest is warmed by the waters of the bay and the ocean, which are then warmer than the land. Consequently the temperature of the County is comparatively equable. The numbers of days with maxima above 90° and of those with minima below 32° are few. The temperature range, from night to day, is considerable, however, especially in summer, so that nights are always comfortably cool.

On account of their mildness cold spells of winter do little damage. During the spring deciduous fruits on the lower lands are sometimes damaged by frost. On account of its increased density the cold air on frosty nights accumulates in the lower places, so that with ascent of the foothills, and even of slight elevations, temperatures increase and frost damage decreases. As a result a belt that is practically free from damage by low temperatures surrounds the colder sections and extends up into the foothills. In many of the orchards in the lowlands

the blossoming and newly-set fruit (particularly the apricots, which blossom early and are easily damaged) is protected by orchard-heating or "smudging," as it is popularly designated. Early in spring oil-filled heaters are distributed throughout the protected orchards. On nights when it becomes so cold that damage to the fruit is threatened the heaters are lighted to prevent further fall of temperature. The San Jose office of the Weather Bureau assists in this work particularly by warning the interested fruit growers when low temperatures are indicated and by predicting the minima that will be reached in different parts of the Valley.

The following tabular data are included to show the climatic conditions in detail:

Meteorological Extremes and Averages, Compiled from Records of San Jose (Mostly for the Period, 1907 to 1921, inclusive)

Temperature (Degrees Fahrenheit):

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Normal mean	48.1	50.9	53.1	56.3	58.5	62.7	66.5	66.1	64.2	60.1	53.2	47.7	57.3
Mean maximum	57.3	60.5	63.7	68.4	70.7	76.6	79.8	79.6	77.9	73.2	65.3	57.5	68.1
Mean minimum	38.9	41.2	42.5	43.9	46.0	49.3	52.5	52.3	51.4	46.5	38.1	37.8	45.1
Highest recorded	76	75	88	90	102	101	103	102	103	97	80	72	103
Lowest recorded	22	25	30	33	35	38	43	42	40	31	27	23	22

Precipitation (in inches):

Normal	2.88	2.54	2.98	1.41	0.68	0.08	0.0	0.04	0.34	0.90	1.89	3.05	16.79
Greatest in 24 hrs.	4.56	2.65	2.60	0.78	1.24	0.36	0.08	0.08	4.47	0.66	1.73	2.77	4.56

Relative Humidity (Per Cent):

Mean at 5 P. M.	69	64	61	56	55	51	52	53	54	54	61	69	58
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Wind (Velocity in Miles per hour):

Aver. velocity	6.2	6.1	5.8	6.1	6.3	6.2	6.1	5.7	5.1	4.8	4.9	5.6	5.7
Maximum velocity for 5 minutes	46	48	36	44	42	34	29	36	27	34	35	42	48
Prevail. direction	SE	SE	NW	NW	NW	NW	NW	NW	NW	NW	NW-SE	SE	NW

Sunshine:

Pct. of Possible	55	57	64	73	75	85	85	83	80	76	69	58	72
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Number of Days:

Clear (3/10 clouds or less)	11	10	10	18	20	24	28	27	22	20	16	12	220
Partly Cloudy	6	7	7	7	7	5	3	4	6	7	7	7	73
Cloudy	14	11	11	5	4	1	0	0	2	4	7	12	71
With rain (.01 inch or more)	13	11	9	4	3	1	0	0	1.5	4	6.5	10	63
With Max. Temp. 90° or above	0	0	0	0	0.5	3	3	2	3	1	0	0	12
With Minimum 32° or below	6	2	0.5	0	0	0	0	0	0	0	1.5	7	17
With thunder	0	0	0	0	0	0	0	0	0	0	0	0	1

Precipitation: Record taken at San Jose. Altitude, 100 feet above sea level.
Top of rain-gauge 3 feet above ground.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1917	0.98	4.88	0.77	0.26	0.22	0	T	0	0.01	0	0.54	0.55	8.21
1918	0.70	2.63	4.48	0.45	T	0	0	0	6.33	0.15	2.24	1.28	18.26
1919	1.06	4.87	2.87	0.06	0.01	T	T	0.01	0.25	0.28	0.09	2.48	11.98
1920	0.10	1.04	3.43	0.92	T	0.21	0	0	0.02	1.71	1.84	3.58	12.85
1921	4.75	1.09	0.80	0.40	0.82	T	0	0	0.21	0.21	1.65	4.66	14.59

Precipitation: Record taken at Campbell. Altitude 200 feet above sea level.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1917	0.49	5.36	0.28	0.23	0.07	0	T	0	T	0	0.83	0.10	7.36
1918	0.51	2.02	3.47	0.46	T	0	0	0	6.16	0.23	3.45	2.19	18.49
1919	1.29	6.60	2.36	0.15	T	0	T	0.01	0.25	0.20	0.03	2.59	13.48
1920	0.14	1.26	4.25	0.68	0	0.22	0	0	0.05	1.93	2.09	4.15	14.77
1921	5.64	1.33	1.01	0.43	0.92	0	0	0	0.14	0.31	1.69	5.68	17.15

SANTA CLARA COUNTY, CALIFORNIA

5

Precipitation: Record taken at Los Gatos. Elevation, 600 feet above sea level.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1917	1.09	14.32	1.36	0.37	0.17	0	T	0	T	0	0.53	1.83	19.67
1918	0.67	5.33	5.82	0.35	T	T	0	0	6.84	0.30	5.96	2.50	27.77
1919	2.48	12.00	4.42	0.05	T	T	T	T	0.52	0.22	0.11	7.24	27.04
1920	0.55	1.34	7.38	2.99	T	0.20	0	T	0.02	2.84	3.97	6.98	26.27
1921	13.71	2.34	2.19	0.59	0.98	0	0	0	0.15	0.34	0.88	12.73	33.91

Precipitation: Record taken at Gilroy. Altitude, 193 feet above sea level.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1911	6.63	2.19	6.19	1.99	0.34	0.07	0	0	0	0.58	0.64	2.04	20.67
1912	2.68	0.17	4.00	2.89	0.84	0.03	0	0	0.71	0.20	0.30	0.51	12.33
1913	4.68	0.05	2.18	0.23	0.83	0.06	0.66	0.08	0	0	3.28	10.12	22.17
1914	14.64	2.81	0.95	1.05	0.05	0.06	0	0	0	0.70	0.52	5.41	26.19
1915	4.84	5.65	1.34	1.19	1.57	0	0	0	T	0	0.52	5.01	20.12

(The Gilroy station was discontinued at the close of 1915)

Temperature: Record taken at San Jose. Altitude above sea level, 100 feet.

Thermometers 12 feet above ground.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1917 Highest	63	73	75	80	77	96	102	86	98	97	76	68	102
Lowest	22	25	31	35	36	42	48	46	44	38	35	32	22
1918 Highest	70	70	81	86	83	93	90	95	82	89	73	68	95
Lowest	28	30	35	33	38	45	46	47	48	39	32	27	27
1919 Highest	67	66	71	78	91	95	95	92	97	86	76	67	97
Lowest	22	31	32	36	39	41	44	44	45	35	32	25	22
1920 Highest	76	70	70	85	90	101	89	93	92	83	72	65	101
Lowest	27	32	34	33	36	44	47	49	43	37	33	32	27
1921 Highest	66	73	75	90	82	97	102	90	98	90	85	68	102
Lowest	29	30	37	34	35	44	47	43	41	39	30	32	29

Temperature: Record taken at Campbell. Altitude above sea level, 200 feet.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1917 Highest	63	68	78	76	73	94	99	82	95	82	73	67	99
Lowest	19	23	30	31	33	38	38	40	39	33	30	30	19
1918 Highest	64	67	73	82	79	91	80	93	78	85	64	63	93
Lowest	26	29	31	31	34	40	41	40	37	36	30	24	24
1919 Highest	63	62	66	73	83	96	95	89	88	83	73	65	96
Lowest	20	28	30	32	36	39	41	40	40	32	27	24	20
1920 Highest	72	68	79	80	80	94	80	91	89	77	68	66	91
Lowest	25	29	32	31	33	34	40	42	38	35	31	29	25
1921 Highest	62	68	71	81	79	93	99	86	93	88	81	67	99
Lowest	28	29	33	31	31	39	43	40	37	35	26	29	26

Temperature: Record taken at Los Gatos. Altitude above sea level, 600 feet.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1917 Highest	62	72	77	82	82	101	106	89	100	98	76	68	106
Lowest	24	29	33	35	38	44	48	46	44	40	41	36	24
1918 Highest	67	69	81	89	86	98	94	98	86	87	74	67	98
Lowest	34	33	33	36	37	46	46	46	48	43	37	31	31
1919 Highest	64	62	72	80	94	97	98	96	98	86	74	66	98
Lowest	28	33	34	39	40	41	43	46	45	38	32	28	28
1920 Highest	74	69	70	87	94	102	90	96	90	80	70	62	102
Lowest	32	33	33	35	37	44	47	48	44	41	37	36	32
1921 Highest	63	73	76	90	84	101	104	94	100	90	84	67	104
Lowest	32	35	38	34	37	41	47	46	43	43	35	35	32

Temperature: Record taken at Gilroy. Altitude above sea level, 193 feet.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1911 Highest	70	70	85	85	95	95	100	95	93	95	75	75	100
Lowest	30	28	40	40	50	45	50	50	55	40	30	25	25
1912 Highest	70	75	70	75	95	105	106	110	98	90	75	70	110
Lowest	30	30	35	40	45	55	50	55	45	35	30	24	24
1913 Highest	65	70	85	95	90	95	110	105	106	90	80	70	110
Lowest	20	30	30	35	40	45	50	55	45	37	35	30	20
1914 Highest	68	78	88	95	96	101	96	104	95	90	76	62	104
Lowest	32	31	37	43	51	54	55	54	50	40	34	30	30
1915 Highest	60	58	85	75	93	101	97	102	90	73	65	102
Lowest	30	34	32	40	45	58	53	58	40	38	30	30

[NOTE]: The station at Gilroy was discontinued at the close of 1915.

HIGHWAYS, ROADS

Twenty-six thousand automobiles and auto trucks in Santa Clara County are significant of the enjoyment of good roads by the farmers, fruit growers and city dwellers; of the 1,200 miles of roads in the county at least 800 miles, although not all of them paved, may be termed first-class. The cement-paved State Highway from San Francisco to Los Angeles, coast route, runs the entire length of the valley; a similarly paved branch connects Oakland, on the east side of the Bay, with San Jose; another paved branch runs from San Jose to Santa Cruz and Capitola, coast resorts, and still another branch from the State Highway to the historic city of Monterey, to Pacific Grove, and other seaside towns. The Board of Supervisors has a continuous program of yearly road construction of modern type, and all the cities and towns in the county are connected with paved or fine macadam roads. Time, expense and inconvenience are saved by the orchardists and rural dwellers because of the excellent roads that form a perfect network throughout the valley. The western foothill roads of red-tinted rock from the quarry near Saratoga are firm, smooth and attractive, and the dirt roads on the floor of the valley are maintained in fine condition the year around; in the mountains the roads are not good for the few months during the winter, but spring, summer and fall they are in excellent shape for team and auto traffic.

A good road, not exceeding at any point a six per cent grade, leads from San Jose to the Lick Observatory, at the summit of Mt. Hamilton, and the road to the State Redwood Park, in the Santa Cruz mountains, is paved to the foothills, at Saratoga, and from that place to the summit the present dirt road will be transformed in a few years into a modern automobile road; the road from the summit down into the Park was built and is maintained by the State.

In addition to the State Highway, the county has 166 miles of paved roads of the cement and the oil-macadam types, and more than 200 miles of water-bound macadam roads; there are 191 concrete bridges, of various sizes, in the county.

TRANSPORTATION—

Santa Clara County is indeed fortunate in the matter of rail transportation, being served by Southern Pacific Company, and San Jose being on main line of the Sunset Route, over which the longest distanced train in the United States is operated: The Sunset Limited, solid Pullman train running through to New Orleans, with one car destined Washington, D. C., without change. At New Orleans direct connections are made with Southern Pacific steamers for New York and Havana and direct rail connections for all points north and east.

There are twenty-two trains daily each way between San Jose and San Francisco (making fast time), distance 47 miles. Local service on the east side of the Bay via Niles to Oakland makes connections for the San Joaquin and Sacramento Valleys, also direct connections with American Canyon Route Overland trains via Southern Pacific to Ogden, with through service to Chicago, St. Louis and other important eastern cities. Connections are also made at Oakland Pier with Shasta Route trains with through service to Portland, Oregon, Seattle, Washington, and other northwest points. There are four

through trains daily between San Francisco and Los Angeles, giving service to San Jose and other points in the Santa Clara Valley. Southern Pacific also operates convenient trains San Jose to Santa Cruz, Monterey, Pacific Grove and other seaside resorts, with attractive excursion rates.

One-way local fare to Oakland is \$1.50 and to San Francisco \$1.74. Daily monthly commute tickets to San Francisco or Oakland are \$16.77 and family commute tickets, good for fifteen round trips, limited to six months, cost \$27.86. Book tickets, good for bearer and friends, containing ten single trip tickets (limit sixty days) may be purchased for \$10.83.

Western Pacific have a branch connecting with their through line at Niles, thence to Oakland and San Francisco, as well as to all eastern territory. At present they are operating freight service only out of San Jose, but expect to put on passenger service in the near future to connect with their through passenger trains at Niles.

In the matter of freight service and freight rates San Jose and vicinity is well situated, enjoying the same all-rail rates to and from trans-continental points as San Francisco, Los Angeles and other main line points and its proximity to San Francisco enables shippers who desire to route via the Port of San Francisco at a low local rate and take advantage of deep water shipping thence when such routing appeals to them. Local freight rates to San Francisco and other points are very reasonable, special commodity rates being published covering the prevailing production, i. e., dried and canned fruits. There are also a number of auto stage and auto truck lines operating between San Jose and the Bay Cities.

The Peninsular Railway, an electric line, covers the Santa Clara Valley with a total mileage of approximately 100, giving excellent service between San Jose, Campbell, Los Gatos, Saratoga, Cupertino, Los Altos, Monta Vista, Palo Alto and foothill district on the west side, as well as giving excellent service to the City's playground—Alum Rock Park, on the east side. Cars of this company are large, roomy, convenient and comfortable.

EDUCATION

It is doubtful if there is a county in the United States better equipped in all educational lines than Santa Clara County, and climate and roads are such that except in a few districts in the mountains not a single day's attendance need be lost because of weather or road conditions, nor is there anywhere a more liberal spirit displayed in the expenditure of money for commodious, sanitary and attractive school buildings, ample playgrounds, and modern furniture and equipments.

School Districts—There are in the County 71 Common School Districts and 9 High School Districts; the enrollment in the Primary and Grammar Grades is 16,668; in the High Schools 10,023; in the seven Kindergartens 925, in private schools 6,145; in the Primary and Grammar Schools 565 teachers are employed; in the High Schools 248 teachers are employed; in the Kindergartens 18. The fact that there are 30 Parent-Teacher Associations in the County attests the keen interest taken by parents in the schools, and the further fact that during the last few years San Jose has expended \$700,000 in

additions to its existing schools and several of the outside districts are expending more than \$1,500,000 in new school structures is convincing as to the keen interest taken by the public in local educational facilities. In addition to the public schools there are several Catholic Schools of pronounced efficiency.

Colleges, Universities—Stanford University, with an original endowment of \$21,000,000, located at Palo Alto, is a co-educational institution famous the world over. Until very recent years tuition was free, but with its steady expansion and growing requirements it has become necessary to charge a small tuition. The Stanford Stadium seats 65,000 persons. The University of Santa Clara, in the City of that name, was established about 75 years ago, and it has a long record of useful public service. It is expending \$1,000,000 in new buildings. Notre Dame College in San Jose, a widely known educational institution for girls, was founded in the early fifties. The College of the Pacific was established in 1852, being one of the oldest and best known educational institutions in the country.

The State Teachers College and Junior College (the original State Normal School), San Jose, draws students from several States and prepares them for public school teachers and for the Universities. This school, the San Jose High School and Stanford University are notable for their attractive Mission architecture. The Polytechnic School, a part of the San Jose High School, has been pronounced by practical educators the finest in the West. For young men and women who wish a commercial business education there is in San Jose a fully equipped Business College.

Lick Observatory—Lick Observatory, at the summit of Mt. Hamilton, 4,209 feet elevation, 13 miles in an air line from San Jose and 28 by winding road that leads to it, is under the control and supervision of the University of California. It is famous the world over for its equipment and its discoveries. No similar institution in the world is better equipped than the Lick, with various sizes and kinds of telescopes and a host of astronomical instruments for all conceivable uses in connection with the work and study that is continuously being carried on by the director and his busy staff. Besides the great refractor, through which any object on the moon 200 feet in height can be readily seen, there are a big Crossley reflector, transits, comet-seekers, photoheliographs, photographic telescopes, spectroscopes, seisometers, photometers, micrometers, chronographs, and a numerous array of other astronomical, physical, meteorologic and photographic instruments.

The Observatory was a contribution to science by a local pioneer, James Lick, whose tomb is in one of the supporting pillars of the 36-inch telescope. Mt. Hamilton was selected for this observatory because of the ideal atmospheric conditions, which make it probably the most effective in the world for all kinds of observations. Much of the work carried on is of an extremely technical nature, but it may be said that many new comets and double stars and Jupiter's fifth satellite were discovered there and many notable later discoveries have been made.

Visitors are welcome at all times, but the big telescope is for public use only Saturday evenings. There is a good road to the summit, and the trip is one of the most wonderful and delightful, because of the vast scope and variety of scenery brought to view, in

all the world. Automobiles can reach the top without going into low gear, as the road is smooth and wide and at no point exceeds a six per cent grade. A mail auto stage, carrying passengers, makes the trip daily and on Saturdays two trips. At Smith's Creek, 18 miles from San Jose, at the base of the main summit, is an excellent hotel, where meals can be had, and lodgings if desired; from the hotel to the summit by trail is two and a half miles.

James Lick left \$700,000 for the Observatory, and the county built the road at a cost of \$78,000. Larger telescopes than the big refractor have been built since its construction, but none has contributed more to the present fund of astronomical knowledge.

County Library—The County Free Library has been an important educational factor in the county since its establishment July 1, 1914. There are now 26 community branches and 71 school branches, and the circulation during the past fiscal year was 192,551 books, being an increase of over 70,000 since last year. The main Library is housed in the County Hall of Justice, in San Jose, and if there is not a sufficient number of books at a branch the custodian may ask for more at any time, and the larger branches have several hundred books on hand all the time. A shipment of books is sent to each branch every month and at least 50 new books every quarter. A borrower may ask for any book not at his nearest branch library and it will be sent him from the main Library, or borrowed from the State Library. The County Library is serving 16,956 borrowers; it is free to all residents of the county, being paid for by a tax levy of 3 cents on the \$100 of assessments. Last year the Library expended \$21,580.93 in its activities, which are increasing steadily year by year, with corresponding increase in its influence and educational benefits.

CHURCHES, FRATERNITIES, SOCIAL ACTIVITIES, RECREATION, AMUSEMENTS—

Churches—New comers who have been connected with churches in their old homes will have no difficulty in renewing their religious affiliations here, as practically all the denominations, Catholic and Protestant, are represented throughout the valley. In San Jose there are more than 60 church organizations, all the leading ones having substantial and attractive church edifices, and in every other city in the county the churches are a prominent feature.

Fraternities—All the fraternal, benevolent and patriotic orders are represented in the county, several of them having fine structures.

Amusements—San Jose has six theaters, and in every city in the valley there is at least one.

Recreation—Recreation facilities cover a wide field: the Country Club and golf links near San Jose, one at Gilroy, one at Stanford, and another at Saratoga; tennis courts; plunges at Alum Rock Park, Hotel Vendome, the Y. M. C. A. and the Y. W. C. A.; playgrounds for the young at Alum Rock Park, in San Jose, and in the other communities; more than a thousand miles of highways and roads leading to foothill, mountain and seaside resorts and camping spots; quail, duck and deer hunting, and trout fishing, each in its season; yachting on the Bay, from the club house at Alviso, only seven miles from San Jose; and all

kinds of outdoor activities, permitted by our rainless season from April to November and during a good portion of the winter months.

Social Activities—Every community has its social, culture and music clubs, and social life in the valley is active, varied, pleasant and satisfying.

ASSESSMENT, TAXATION, ETC.

Property in Santa Clara County, and in San Jose, is assessed on a basis of from 50 to 60 per cent of its actual valuation. The county tax rate for the fiscal year 1922-23, outside cities, is \$2.15, and inside cities it is \$1.72. The municipal tax rate in San Jose is \$1.45, plus county rate \$1.72, plus school tax \$1.13, making a total of \$4.30.

County Area, square miles.....	1,355
County Area, acres.....	867,200
Number of Farms.....	23,900
Number of Acres Assessed.....	743,822

County Assessment

Real Estate Inside Incorporated Cities and Towns.....	\$ 18,845,875
Improvements on Same.....	17,103,455
Real Estate Outside Incorporated Cities and Towns.....	34,136,160
Improvements on Same.....	14,842,365
Improvements on Real Estate Assessed to	} Inside Cities 26,835
Persons Other than Owners of Real Estate.....	
	} Outside Cities..... 37,495
Total Value of Real Estate and Improvements.....	\$ 84,992,185
Personal Property in Cities.....	4,733,300
Personal Property in County, Outside Cities.....	4,528,460
Personal Property Collected by Assessor, in Cities.....	2,160,130
Personal Property Collected by Assessor, Outside.....	716,390
Solvent Credits and Money, Inside.....	469,045
Solvent Credits and Money, Outside.....	260,165
Total Value of All Non-Operative Property.....	\$ 97,859,675

Operative Roll

Real Estate	\$ 1,740,010
Improvements	421,265
Personal Property, including Money and Solvent Credits.....	11,224,310
Total Value of All Operative Property.....	\$ 13,385,585
Grand Total of All Property Assessed.....	\$111,245,260

Exempt Property

Veterans, 961 exempt; value of exemption.....	\$ 925,225
Stanford University	411,700
College of Notre Dame.....	220,760
University of Santa Clara.....	156,380
College of the Pacific.....	48,400
	\$ 1,762,465

Valuation Incorporated Cities

Alviso	\$ 256,775
Gilroy	1,115,810
Los Gatos	1,467,310
Mayfield	495,195
Morgan Hill	316,015
Mountain View	769,350
Palo Alto	4,568,880
San Jose	28,278,265
Santa Clara	2,672,590
Sunnyvale	1,048,980

Property in Road Districts

Road District No. 1.....	\$ 9,141,465
Road District No. 2.....	4,901,955
Road District No. 3.....	6,599,100
Road District No. 4.....	18,225,780
Road District No. 5.....	14,884,785

BANKS—Jan. 1, 1923

	City	Capital	Deposits
Bank of Italy.....	San Francisco Office.....	\$15,000,000	
Bank of Italy (branch).....	San Jose		\$11,361,110
First National Bank.....	San Jose	500,000	7,069,401
Mercantile Trust Co.....	San Francisco Office.....	4,000,000	
Garden City Br. Mer. Trust Co.....	San Jose		5,927,739
Bank of San Jose.....	San Jose	300,000	5,690,727
Security State Bank.....	San Jose	100,000	1,693,595
Security Savings Bank.....	San Jose	100,000	3,003,069
Growers Bank.....	San Jose	300,000	1,033,546
Bank of Italy (branch).....	Santa Clara		1,914,432
Mercantile Trust Co. (branch).....	Santa Clara		580,967
Bank of Italy (branch).....	Gilroy		1,620,684
Mercantile Trust Co. (branch).....	Gilroy		801,015
Bank of Palo Alto.....	Palo Alto	180,000	2,637,580
First National Bank.....	Palo Alto	100,000	1,798,639
The Stanford Bank.....	Palo Alto	50,000	469,017
Bank of Los Gatos.....	Los Gatos	100,000	1,685,529
First National Bank.....	Los Gatos	50,000	667,793
Farmers & Merchants Nat'l Bank.....	Mountain View	100,000	1,191,071
First National Bank.....	Mountain View	50,000	639,998
Mercantile Trust Co. (branch).....	Campbell		803,095
Growers National Bank.....	Campbell	50,000	152,873
Bank of Italy (branch).....	Sunnyvale		597,160
Bank of Morgan Hill.....	Morgan Hill	50,000	451,776
Bank of Milpitas.....	Milpitas	40,000	311,546
Mercantile Trust Co. (branch).....	Saratoga		334,653
First National Bank.....	Los Altos	25,000	146,822

Totals, less Bank of Italy and

Mercantile Trust Co., San Francisco Offices.....\$ 2,095,000 \$52,583,837

The total assets of the 24 banks in Santa Clara County increased from \$25,386,357 in 1911 to \$61,223,697 in 1922, and the deposits from \$20,921,798 in 1911 to \$52,583,837 in 1922. The annual clearings of the banks in San Jose alone have grown from \$29,877,754 in 1911 to \$92,604,796 in 1921, and to \$118,511,851 for 1922.

The People's Finance and Thrift Company, San Jose, is an industrial loan organization, established in May, 1921. It has a capital stock of \$50,000 and resources of \$666,000.

BUILDING AND LOAN ASSOCIATIONS

Name	Date Organized	Resources
San Jose Building and Loan Association.....	Jan. 3, 1885.....	\$2,639,205.89
Mutual Building and Loan Association.....	Mar. 12, 1889.....	4,400,415.20
Santa Clara Building and Loan Association.....	Mar. 19, 1889.....	270,081.00
Nucleus Building and Loan Association.....	Mar. 28, 1889.....	934,902.90
Palo Alto Mutual Loan Association.....	Nov. 14, 1892.....	1,260,912.51
Guaranty Building and Loan Association.....	June 3, 1919.....	1,539,386.43
Home Owners Building and Loan Association.....	August 21, 1919.....	125,000.00
Total Resources.....		\$11,169,903.93

In proportion to population, Santa Clara County is a leader in the number of its Building and Loan Associations and the volume of business done. These associations are extremely helpful to the man of moderate means who desires to own a home and they are an influential constructive element in community growth and progress.

HEAT, LIGHT, POWER, WATER

The following are rates in San Jose:

Coal—For household purposes, \$18 a ton; for power, by carload lots, \$14 a ton; best grade.

Wood—From \$18 to \$21 a cord of four tiers.

Gas—For household and power, on basis of monthly use by meter:

First	600 cubic feet per meter per month, \$0.83		
Next	4,400 cubic feet.....	1.14	per 1,000 cubic feet
Next	5,000 cubic feet.....	0.94	per 1,000 cubic feet
Next	10,000 cubic feet.....	0.84	per 1,000 cubic feet
All over	20,000 cubic feet.....	0.74	per 1,000 cubic feet

Electricity—For household purposes:

First	10 k. w. h. or less per meter per month.....	\$1.00	
Next	40 k. w. h. per meter per month.....	6c	per k. w. h.
Next	150 k. w. h. per meter per month.....	5c	per k. w. h.
Next	800 k. w. h. per meter per month.....	4c	per k. w. h.
Next	2,000 k. w. h. per meter per month.....	3c	per k. w. h.
All over	3,000 k. w. h. per meter per month.....	2½c	per k. w. h.

For power, commercial:

		Rate per k. w. h. for Monthly Consumption of			
		First 50	Next 50	Next 150	All over
		k.w.h.	k.w.h.	k.w.h.	250 k.w.h.
HP of	Connected Load	per hp.	per h. p.	per h.p.	per h.p.
2-9	HP.....	4.0c	2.1c	1.3c	.9c
10-24	HP.....	3.6	2.0	1.2	.9
25-49	HP.....	3.1	1.9	1.1	.8
50-99	HP.....	2.6	1.7	1.1	.75
100-249	HP.....	2.3	1.5	1.0	.7
250-499	HP.....	2.1	1.3	.9	.65
500-999	HP.....	2.0	1.2	.9	.6
1,000-2,499	HP.....	1.9	1.1	.9	.6
2,500 HP and over.....		1.8	1.0	.9	.6

Agricultural power service, for irrigation and other agricultural purposes.

Energy Charge in addition to the Demand Charge

Rate per k. w. h. for Consumption per h. p.

		per year of			
		First	Next	Next	All over
		1,000 k.w.h.	1,000 k.w.h.	1,000 k.w.h.	3,000 k.w.h.
Size of	Annual de-				
Installation	mand charge	per h.p.			
2-4	HP.....	\$6.60*	1.6c	1.2c	.9c
5-14	HP.....	6.00	1.4	1.1	.8
15-49	HP.....	5.40	1.2	1.0	.8
50-99	HP.....	4.50	1.1	.9	.75
100-249	HP.....	3.90	1.1	.9	.75
250-499	HP.....	3.75	1.05	.85	.75
500-999	HP.....	3.60	1.00	.85	.75
1,000-2,499	HP.....	3.30	1.00	.85	.75
2,500 HP and over.....		3.00	1.00	.85	.75

* In no case will the total annual demand be less than \$13.20.

Water—For household purposes:

4,000 gallons or less, 90 cents.

Between 4,000 and 10,000 gallons, 20 cents for each 1,000.

Between 10,000 and 100,000 gallons, 15 cents for each 1,000.

Above 100,000 gallons, 12 cents for each 1,000 gallons.

There is no purer water anywhere than that which comes from our mountain streams and reservoirs and deep artesian wells.

PRICES OF LAND

There is, of course, a wide variation in land prices, according to quality of soil, location, and purposes for which it is adapted. Cattle ranges, all in the foothills and mountains, sell from \$10 to \$35 an acre; general farming land from \$200 to \$300 an acre; fruit lands from \$300 to \$500, and in rare instances as high as \$1,000 an acre, where the soil is exceptionally rich, deep, moist, and suitable for the production of vegetables and berries as well as trees. An abundant water

supply adds to the value of acreage, and in the vicinity of San Jose and in the most desirable foothill sections the lands, in addition to their worth for fruit purposes, have an intangible but very certain element of value for purely residential purposes. First-class orchards, including all improvements, range in price from \$1,000 to \$1,800.

Leases—Most of the orchards are operated by their owners; leases are on a basis of one-third or one-half of the crop, net, to the owner. Renters of lands for early vegetables pay from \$20 to \$30 an acre annually, and the strawberry growers, chiefly Japanese, pay from \$35 to \$50 an acre.

IRRIGATION

Readers of this booklet will observe that there is a very considerable variation, in the several articles on prunes, apples, pears, etc., in the figures given by the different authorities showing the cost of irrigation. This variance is consistent, however, with the facts, and is due to the great difference in depths, and therefore cost, of wells; the supply, whether abundant or meager; the number of irrigations practiced, and also whether the water supply is procured from wells or from the valley streams. Some orchardists rely solely or chiefly upon water taken in ditches from the streams, and the numerous orchards in the foothills are not irrigated at all; but practically all the orchards on the floor of the valley are irrigated, mostly from wells. With annual rainfall averaging 16 inches at the lowest point in the valley, 30 inches or more in the foothills, and from 40 to 60 inches in the surrounding mountains, irrigation is not essential in this valley for normal tree growth and fruit production, if planted in right soils, and for many years it was not practiced; but irrigation gives quicker growth and larger fruit, and in old orchards, or orchards in gravelly or scant soil, it is essential.

ORCHARD, VINEYARD, VEGETABLE, BERRY AND CEREAL ACREAGE IN SANTA CLARA COUNTY

Fruits and Nuts

Almonds	400 acres
Apples	1,200 acres
Apricots	17,000 acres
Cherries	4,000 acres
Figs	40 acres
Lemons	200 acres
Limes	10 acres
Olives	250 acres
Oranges	40 acres
Peaches	6,000 acres
Pears	4,500 acres
Plums	1,500 acres
Pomelos	10 acres
Prunes	64,500 acres
Walnuts	2,500 acres
Total	102,150 acres

Grapes

Grapes	12,000 acres
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SANTA CLARA COUNTY, CALIFORNIA

Berries

Strawberries	600 acres
Raspberries, Blackberries and Loganberries	450 acres
Total	1,050 acres

Cereals

Alfalfa	5,670 acres
Barley	19,000 acres
Hay	31,000 acres
Oats	3,800 acres
Wheat	2,200 acres
Total	61,670 acres

Vegetables

Beans	200 acres
Corn	150 acres
Onions (table)	700 acres
Onions (seed)	1,260 acres
Peas	5,860 acres
Potatoes	450 acres
Tomatoes	7,000 acres
Sugar beets	6,575 acres
Other vegetables	300 acres
Total	22,495 acres
Seed Farms	2,000 acres

Livestock

	Number	Value
Cattle (Pruebred)	1,000	\$ 100,000
Cattle (Stock)	26,800	804,000
Dairy Cows	2,700	135,000
Goats (Milk)	175	875
Hogs	6,300	73,800
Goats (Stock)	135	540
Horses	4,465	223,150
Mules	85	4,250
Poultry (dozen)	18,675	56,025
Sheep	150	450
Total Value		\$1,398,090

Annual Orchard Production

Almonds	200 tons
Apples	10,000 tons
Apricots	25,000 tons
Cherries	10,000 tons
Grapes	40,000 tons
Olives	500 tons
Peaches	25,000 tons
Pears	35,000 tons
Plums	3,700 tons

Prunes (dried)	60,000 tons
Walnuts	500 tons

Total	209,900 tons
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Berries

Strawberries	60,000 chests
Raspberries, Blackberries and Loganberries	45,000 chests

Total	105,000 chests
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Soil Productions

Sugar Beets (for refineries)	150,000 tons
Beans (canning)	500 tons
Peas (canning)	150 tons
Spinach (canning)	1,000 tons
Tomatoes (canning)	60,000 tons
Potatoes (fall)	1,000 tons
Potatoes (early)	1,500 tons
Other vegetables: cabbage, cauliflower, celery, artichokes, lettuce, squash, corn, onions, etc.....	2,500 tons

Total	216,650 tons
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Exportations, Domestic and Foreign

Canned fruits, berries and vegetables	100,000 tons
Dried fruits	65,000 tons
Green fruits	12,000 tons
Garden Seed	1,000 tons
Miscellaneous soil products	2,000 tons

Forty per cent of local prunes is sold in foreign markets and 20 per cent of our canned fruits; 60 per cent of the prunes and 80 per cent of the canned fruits are sold in domestic markets, chiefly in the East and Middle West. The 40 canneries in San Jose and Santa Clara County put out approximately one-third of the entire canned fruit output of California.

CROPS

The following articles covering the soil and orchard industries in this county have been arranged alphabetically merely for convenience, and their order does not in any way indicate their relative importance. As will be seen by the table on orchard and other acreage, the county's main production is prunes, followed by apricots, then pears, peaches, cherries, and the other fruits.

ALFALFA—

Sections—Alfalfa is grown chiefly in the main dairy sections, being the lower lands between San Jose and the Bay and the country around Gilroy, but there are also fields of alfalfa scattered throughout the valley. There is a total acreage in the County of from 6,000 to 6,500 acres.

Soil—A dark sediment soil, underlaid with adobe, is best suited for alfalfa in this valley, and ample warmth of sunshine, but it will

grow well on lighter soils, if well and frequently irrigated. Any soil that is free from hardpan near the surface, and with no alkali, will grow fair crops, but it will withstand a small quantity of alkali in the soil after it has once started; fortunately, there is little alkali in Santa Clara valley. The comparatively mild winters here are favorable for alfalfa, which therefore gets a good growing start early in the spring.

Preparing the Soil—As alfalfa is grown almost entirely on the level floor of the valley, the checking of the land for irrigation is comparatively inexpensive. The usual practice is strip checking; that is, checks 25 by 500 feet or thereabouts; where the land has sufficient slope to cause the soil to wash, square checks 80x80 feet are preferred. The cost of checking varies; throwing up the small levies costs from \$6.00 to \$12.00 per acre, and where leveling is necessary the cost is correspondingly greater.

Irrigation—As a rule, there is abundant water where alfalfa is grown; in the low lands there are artesian wells with surface flow; other wells are pumped and surface pumping is the rule; in the Gilroy section the lift is greater. There are no large ditch companies operating in this County from which water can be obtained. Electric power is easily obtainable, and cheap, and the number of irrigations varies from 4 to 6, depending on local conditions; the average cost is \$10.00 an acre per year.

Yield—From four to six cuttings are usual, yielding during the year from five to seven tons dry but on the very best alfalfa lands the yield is larger.

Marketing—Most of the alfalfa is grown by the dairymen for their herds, and comparatively little goes to the hay markets. That which is sold brings from \$14.00 to \$20.00 per ton of loose hay. Good alfalfa land, well provided with water, sells from \$300 to \$500 an acre.

ALMONDS—

Although fine almonds of different varieties are grown in this valley, experience has demonstrated that fruits grown here are far more profitable, hence the local almond industry is not large. The present commercial production is not over 200 tons annually. However, a number of sections in the valley are well suited to the almond. The practically frostless condition of some of the elevated lands, and the light soils, especially of the Campbell district, are ideally suited. The almond requires less moisture than most other trees, and for that reason where water is the problem the planting of the almond might solve the problem. Varieties usually grown are the Nonpareil, I.X.L., Texas Prolific and some Jordans.

APPLES—Authority: Horace G. Keesling, San Jose.

Sections—Apples may be successfully grown in practically every section of Santa Clara valley where water for irrigation is available or the seasonal rainfall is sufficient. At present most of the apple orchards are located near the Bay, a condition that may have resulted because of the general planting of prunes over the valley, and too because of the greater natural moisture in the low-lying soils; there

are also a number of apple orchards here and there in favorable localities in the mountains on the west side of the valley.

Soils—No particular soil is best for apples, since they succeed in soils ranging from adobe to sandy sediment. Good drainage yet ample moisture are the essentials in the production of vigorous trees and abundant crop of apples.

Climate—The climate of Santa Clara valley is well suited to the production of high quality apples. The temperature is never too high, the air carries sufficient moisture, and the cool nights are favorable for perfect apple production. The crops have never been seriously shortened by frost at blossoming time.

Varieties—The Newtown Pippin, White Winter Pearmain, White and Red Astrachan, Gravenstein, Skinner's Seedling, Mammoth Black Twig, Jonathan, Bellefleur, Hoovers, and many other varieties, grow well and produce good crops of excellent apples.

Culture—Methods of working the soil vary from intensive clean cultivation to none at all where water is plentiful. On the high lands two irrigations, one in April and one in July, are usually sufficient. The cost of water varies according to location and the location of the water table. Orchards in certain mountain sections do well without irrigation. Pruning as at present practiced consists mainly of removing surplus branches where they are too thick, and this process is comparatively inexpensive.

Pest Control—The codling moth is the only serious pest, and it is controlled by the regulation method used the country over, spraying with arsenate of lead in solution. From two to four sprayings are customary, the first when the blossoms are beginning to drop. The cost varies according to size of trees, price of material and labor.

When to Plant—Young trees on vigorous apple rootstocks (Northern Spy preferred), are set 25 feet apart each way. Large holes are dug and the trees planted carefully to encourage good root growth, and the trees are usually cut back to heights of 2½ to 3 feet when planting. The planting season covers January, February, and March.

Average Crops—Five hundred boxes per acre is suggested, but twice that quantity is not unusual from good-sized trees. The proportion of shipping apples varies to care from about 95 per cent to 50 per cent, or even less if spraying has been neglected.

Harvesting—Apples are picked by hand into picking pails and transferred to boxes in the orchard; great care is exercised to prevent bruising or pulling out the stems. The time of picking is different with different varieties and even with trees of the same variety, and only experience is a safe guide. Many apples are picked when too green and some are allowed to get too ripe. The flavor and keeping qualities are enhanced by picking at the correct stage of maturity and storing in a cool place. The cost of picking depends upon the variety, size of apples, percentage of crop, wages and efficiency of help.

Marketing—Packing may be done by the grower in his own sheds or packing house, or the apples may be hauled loose in lug boxes to the warehouse of some shipping company, and packed there.

Cost of Production—War time prices for labor and material are receding, but at the present time (1923), the cost of packing, embrac-

ing shook, nails, wrapping paper and labor for making the boxes and for packing the apples, will average 50 cents a box. The cost of production of an acre yielding 600 boxes, 50 per cent of which are packed, is approximately:

Cultivation	\$10.00
Irrigation (twice)	25.00
Spraying	25.00
Pruning (light)	10.00
Picking	50.00
Packing	150.00
Hauling	10.00
Total	<hr/> \$280.00

For a number of years commercial growers have been receiving from \$1.50 to \$2.50 a box for first-class apples of desirable marketing varieties, and at the rate of from \$45.00 to \$60.00 a ton in the nearby markets for apples delivered loose in lug boxes.

APRICOTS—Authority: R. P. Van Orden, President Fruit Growers of California, Inc., San Jose.

Extent—The apricot production of Santa Clara County is second only to that of prunes. The bearing acreage of apricots in the County is approximately 12,500 and non-bearing acreage 4,500, or a total of 17,000 acres. The yield varies from year to year, as conditions are favorable or otherwise, and will average from 4 to 8 tons green per acre.

Sections—The apricot acreage is well distributed over the valley and extends well up into the foothills on both the east and the west sides of the valley. Mountain View, Los Altos, Sunnyvale, Cupertino, Saratoga and Los Gatos comprise what is known as the West Side, and Berryessa and Evergreen, extending south to Morgan Hill and Gilroy, the East Side; most of the apricots are grown north of Edenvale, but planting is gradually working south.

Soil—Apricots are grown in a wider variety of soils than prunes, but like the prune they thrive best in the heavier, deeper soils of the valley than in the lighter, shallower soils of some of the foothill orchards and produce greater average per acre, due to the better and deeper soil as well as to more frequent irrigation; but the foothill "cot" enjoys the distinction of superior quality for either drying or canning, in spite of smaller size and less tonnage.

Climate—Apricots usually bloom late in February or early in March, and therefore they are subject to frost, particularly on the floor of the valley, while the foothill orchards are immune. Smudging is resorted to in the frost belts, and when frost threatens the crop the smudge pots are lighted and the temperature is thus raised and the crop usually saved. This practice is becoming more general each year as a means of insurance against frost.

Irrigation—Irrigation is practiced quite generally throughout the valley, wherever water is to be obtained. The principal source of water is deep wells, ranging in depth, according to location, from 200 to 1,000 feet, and the water is lifted from 50 to 150 feet, flowing from 150 to 1,200 gallons per minute. A good well usually supplies

sufficient water not only for the owner's orchard but also for those of his neighbors who may have no wells of their own. Two irrigations are customary, one in May and the other as soon as the crop is harvested.

Cultivation—Intensive cultivation is essential to success, whether irrigation is practiced or not. Planting is done in February or March; this is followed with a thorough cultivation about every two weeks. The harvest begins in the first or second week in July, according to weather temperature, and lasts from three to four weeks.

Pruning—Pruning must be done every year; some orchardists prune immediately following the harvesting, but the pruning is generally done when the trees are dormant, in November or December.

Spraying—In order to keep the trees in a healthy, vigorous, growing condition, spraying is becoming quite general with this fruit, and the results obtained in growing better and more fruit pay the grower well for the added labor, cost of equipment and material.

Fertilizing—Commercial fertilizers are used to some extent and fertilizing pays well on the investment, but the method usually followed is the growing of some cover crop in the orchard, which both enriches the soil and keeps it in better working condition. Such crops should be planted as soon as the apricot harvesting has been completed and they should be turned under when the spring plowing is done.

Thinning—A good healthy orchard usually sets more fruit than it can properly mature, and when this occurs the young fruit must be thinned, after danger of frost has passed and before the pit hardens; this insures both size and quality of fruit, and it should be done to obtain the best returns from the orchard.

Yield—The yield varies from year to year, and the best method of computing this should be based on the average of a term of years; from 4 to 10 tons an acre is considered about right; 15 tons per acre have been grown, but this is not common and should not be taken into calculation.

Varieties—In Santa Clara County the Blenheim variety is almost universally grown, because of its prolific bearing qualities and also is considered the best canning variety. A few orchards still have some old trees of Moorpark and Alameda Hemskirks, as well as a few Royals, but these are fast disappearing for the Blenheim. When the industry was first started apricots were grown mainly for drying purposes, but they are now grown chiefly for canning.

Prices—The price received by the grower for canning apricots running 12 to 14 to the pound is from \$65 to \$100 per ton. The price of dried apricots ranges from 15 to 25 cents per pound, according to size and quality.

Harvesting—Picking usually begins the first week in July and extends over a period of from three to four weeks. Great care must be exercised in picking, as sometimes warm weather hastens ripening, and if sufficient help is not obtained at once the fruit cannot be delivered to the canneries, as it will be over-ripe, and it must be dried.

Apricot Pits—When the industry was first begun the apricot pits were used for fuel; later they brought about \$10 per ton; they

were cracked and the kernels shipped to Europe. Today the pits are worth from \$40 to \$50 per ton and the kernels are used for confections; also a fine quality of salad oil is extracted, and the shells are manufactured into a special grade of charcoal.

Cost of Planting—When planted in squares of 24 feet, 76 trees per acre are required, and the cost, including trees, will range from \$45 to \$74 per acre. Intercrops of beans, spinach, tomatoes, or other garden truck may be planted until the orchard comes into bearing, which is from 4 to 5 years.

Price of Land—Land suitable for the planting of apricots will cost from \$500 to \$1,000 an acre in the valley, according to location; in the foothills it can be bought for less.

Cost of Production—The annual cost per acre varies as the work is carefully and properly done or otherwise, the expense being governed by the number and thoroughness of the cultivations, irrigations, sprayings, and other essential work in connection with the orchard culture. A general average would be approximately around \$160 per acre.

BERRIES—Authority: Ralph L. Snell, Mountain View.

Sections and Acreage—Berry growing in Santa Clara County has had a marked impetus during the past few years. With ample water, berries may be grown almost anywhere in the valley, but there are sections where climate, soil and water supply combine to make conditions especially favorable. The trade winds that prevail here during the summer, coming up over the waters of the bay, modify the heat to the extent that berries do not sunburn. The chief berry sections lie between San Jose and Alviso, toward the bay, the eastern portions of Sunnyvale, Mountain View and Palo Alto districts, and Gilroy district. There is in the county an approximate acreage of 600 in strawberries and 450 in blackberries, loganberries and raspberries, or a total of 1,050 acres.

STRAWBERRIES—Approximately 90 per cent of the strawberries are grown by Japanese, on a 50-50 basis with the owner of the property, the Japanese doing all the labor of cultivating and picking. The strawberry plants bear three distinct crops during the season, but are good only for three years, and after the third season are plowed up. The average returns per acre for the three years are \$5,000 gross.

BLACKBERRIES, LOGANBERRIES—Of Blackberries, the Mammoth variety is chiefly grown; both Blacks and Logans will produce enormous crops on almost any of the heavy soils in the districts contiguous to the bay, and they bear well in any part of the valley if properly watered and cultivated; they are profitable for a period of from eight to ten years, when the vines must be renewed.

RASPBERRIES—The raspberry promises soon to be in the front rank both in acreage and production in the section between San Jose and Palo Alto, as the conditions here seem to be particularly favorable for this berry. In 1915 the writer introduced the Ranaree raspberry

from Rochester, New York, and it has proven to be the greatest producer and the best shipper of any of the red raspberries. One acre has produced for me during the last two years \$8,400 gross; these canes are now six years old.

Marketing—Until 1920 the bulk of the berries grown in this valley were shipped to the San Francisco, Oakland and San Jose markets, but with increasing acreage the growers realized that they must reach out for additional markets, so the Central California Berry Growers' Association was organized; this organization now controls the bulk of the acreage in the county, and it has succeeded in marketing the entire output of its members at the nominal sum of 2½% to the grower. In 1921, the growers shipped from 40 to 50 car-loads to eastern markets with such success that the Mountain View and Runnymede growers organized on a co-operative basis and constructed a large pre-cooling plant for berries and also green fruits. This new outlet so stimulated the industry that last year (1922) the shipments east considerably exceeded 150 cars. At Gilroy, in the southern end of the county, the local cannery handles large quantities of berries.

Remarks—With the possibilities of an unlimited market by pre-cooling, berry growing is destined to become one of the leading soil industries of the county, as it is highly profitable; the first year's crop will pay for the plants and the labor of planting. It is a perishable fruit and must be picked every third or fourth day, the harvesting covering the period from May to December, and in the case of strawberries usually a month earlier. The work on strawberries is done almost exclusively by Japanese, but nearly all of the bush berries are owned and cared for by the white growers. The best varieties of the raspberry adapted to this county are the Ranaree and the La France; the two combined will furnish a continuous crop from May to December; the canes should be set out early in January to insure good returns the first year.

CHERRIES—Authority: H. G. Stelling, Sunnyvale.

Sections—Not all sections of the county are suitable for cherries, but there are certain localities that are eminently fitted for cherry production. Nowhere in California can be found cherry orchards in which the trees are so uniformly large and thrifty as those in the section known as "The Willows," just outside of San Jose, to the south. Many of these orchards are more than fifty years old and still producing heavily. When they change hands they sell for from \$1,500 to \$2,500 an acre. This section lies between the Los Gatos and Guadalupe creeks, and the soil is sedimentary and very deep, with almost unlimited feeding ground for roots.

Another favored cherry section is along Stevens creek, in the vicinity of Mountain View and Sunnyvale. Although the industry here is younger than in "The Willows," it has built up and grown until this section for a number of years has produced as many cherries as the older cherry districts, and orchards here sell also for from \$1,500 to \$2,500 an acre. There are a few orchards in the Berryessa district, and a number of small orchards in other sections of the valley, including some parts of the Santa Cruz mountains.

Soil—The soil for cherries is preferably sedimentary, rich and deep. The tree is a gross feeder and requires good land. No fruit growing requires more caution in its undertaking. It is essential to success that the soil, water and climatic conditions be combined so that the tree will have little to contend with even after a long period of years, for the tree is not hardy; it is almost free from pests and diseases, but will die from lack of plant food.

Climate—Climate does not influence the production as much as the soil. The crop is seldom damaged by frost, but it is occasionally damaged by a heavy rain when the trees are in blossom. A strong wind when the fruit is on the trees may damage the crop.

Varieties—Varieties grown here chiefly are the Black Tartarians, the Black Republican, the Royal Ann and the Bing. The roots are the Mazzard and the Mabeleb.

Irrigation—Water is applied once in the spring and again after the crop has been taken off. It is either pumped from wells or secured from irrigation companies; in either case the cost for irrigation will amount to \$18 per acre.

Cultivation—Cultivation consists of plowing to a depth of ten inches and three or four cultivations; this will cost \$20 per acre.

Pruning—Pruning is important when the tree is young and being shaped; after that it can be left alone, except where an occasional damaged limb must be cut out; the cost is negligible.

Spraying—Spraying with arsenate of lead to get rid of slugs is resorted to, to prevent them from defoliating the tree; this spraying will cost \$8 per acre. Birds, particularly the linnet, are frequently an annoyance and sometimes a pest.

Fertilizing—Fertilizing a cherry orchard with commercial fertilizers at the rate of from 500 to 1,000 pounds to the acre is a common practice; it costs about \$35 per acre per year.

Harvesting—Harvesting begins the last of May and extends through the month of June. The cherries must be handled quickly when ripe. The trees are picked over three or four times. Most of the cherries are packed in 10-lb. boxes on the ranch, delivered to commission merchants and sold at auction in the East, but the Royal Anns go chiefly to the local canneries.

Cost of Harvesting and Packing—

Picking, at 2½c lb., 10 lbs. to box.....	25c
Packing, 10-lb. box.....	15c
Boxes, each	15c
Total	55c

Yield—The yield fluctuates from year to year, but there are always some cherries. The grower will say: "I have so many tons, but it is a short crop." A mature orchard should produce 700 boxes per acre per year as an average over a period of years; 700 boxes is equal to 3½ tons.

Price—The price received is from 75c to \$1.10 a box net to the grower, after a commission of 7 per cent and shipping costs are deducted. The average price is \$1.00 per box.

Income—The income from 700 boxes at \$1.00 per box is \$700 per acre. The boxes, picking and packing costs for 700 boxes at 55 cents are \$385 per acre. The cultivation costs are as follows:

Plowing, etc.	\$20.00
Irrigating	18.00
Spraying	8.00
Fertilizing	35.00
Per acre	\$81.00

The cost of production, then, is \$385 plus \$81, or \$466 per acre, leaving a profit of \$234 per acre, from which interest, taxes, etc., must be taken. But many orchards produce much more than 3½ tons per acre, and many growers, who give due attention to their orchards and therefore get heavier yields, would consider these figures far too conservative.

Planting Young Orchard—Young orchards should be set out preferably in January, and the trees should be placed 30 feet apart, making 48 trees to the acre. The planting will cost 15c per tree, or \$7.20 per acre. The young trees will cost 40c each, or \$19.20 per acre. The trees must be cultivated and shaped by pruning while they are young, and they will come into good bearing at about 10 years of age. They are long lived.

Auxiliary Crops—Crops of beans, corn, tomatoes, etc., can be grown between the rows of young trees, and these should produce a profit while the trees are coming into bearing.

CITRUS FRUITS—Authority: L. Woodard, Campbell.

Oranges—Although orange trees thrive in restricted portions of the valley, they are not grown commercially, because of the prevailing cool summer temperature here and consequent deficiency in the sugar content. The trees are grown, however, in nearly all sections for ornamental purposes in the gardens, their white fragrant blossoms and golden fruit gleaming through the green foliage adding greatly to the attractiveness of the home surroundings. In the warm foothills of the Evergreen section, and the Saratoga and other limited localities on the West, sweet, delicious fruit is produced, but probably 40 acres will cover the entire orange acreage in the valley.

Lemons—The summer conditions in this valley are ideal for the growing of lemons, but the occasional winter freeze which we are liable to get every five or six years creates conditions of uncertainty that militate against the growing of the lemon on a commercial basis. As an element of ornamentation or a part of the family orchard the lemon is desirable; even then some provision should be made for protection in case of heavy frosts during the first few years of the tree's growth.

Sections—Sections where the lemon can be profitably grown are determined by climate and water conditions. The thermal belt extending along the eastern and western foothills is highly favorable; the Evergreen and the Saratoga sections are localities of this kind.

Irrigation—An abundance of water is as essential as favorable climatic conditions. In the foothills the water supply is sometimes inadequate, but on the floor of the valley water can be obtained by

boring to various depths, ranging from a few hundred to several hundred feet. Irrigation costs about the same as for other fruits.

Varieties—The Eureka is a favorite variety, and there are also plantings of Lisbon and Villa Franca.

Planting—There are not over 200 acres of lemon orchards in the county; the trees are planted mostly in a red clay loam, and 20 feet each way. Trees in the nurseries cost about \$1.50 each, but cost of planting and orchard operation averages about the same as that of the leading deciduous fruits. Lemons bear heavily and in suitable sections are remunerative.

Pomelos—Pomelos are grown for ornamental purposes, and along the foothills they bear abundantly, the fruit being of fine quality. There are not more than 10 acres of pomelos in the county.

GRAPES—Authority: W. C. Tesche, Dep. Horticultural Commissioner.

Ranking second among Juice-grape centers of the State, the valley merits high esteem in shipping circles because of the high quality of its products. After enjoying many years of success as a producer of high-grade wine grapes and wines, there occurred a brief depression upon the enactment of the Prohibition Law, followed immediately, however, by a heavy Eastern demand for beverage-grapes. As a result, the past two years have witnessed the greatest prosperity in our grape history. Unheard-of prices, tripling of land values, and the development of an important shipping industry are the features of this period.

Sections—Our important centers are located along the western foothills from Los Altos south to Almaden, in the eastern foothills of the Evergreen district, and approximately half of the total in the southern end of the valley comprising the Morgan Hill, San Martin and Gilroy sections. An average of authoritative estimates gives a total of 12,000 acres of vines. Table grapes do well and the present small acreage is profitable when marketed properly. An excellent Tokay is grown in the San Martin district. Small acreages predominate.

Soil—Soil on which most of the grapes are grown is a reddish, clay loam containing some gravel. It is usually underlaid with a clay containing cracked rock. The drainage is good. This type of soil seems to hold the moisture very well, if the top is worked into a fine mulch.

Varieties—Standard varieties comprising $\frac{3}{4}$ of the acreage are Zinfandel, Mission, Grenache, Mataro and Carignane. The remainder includes Petite Sirah, Alicante Bouschet and similar varieties, grown for certain specific qualities which they possess.

Planting—Eight by eight is the most satisfactory distance for planting, making about 680 vines to the acre. Most of the later plantings have been on resistant roots by grafting the desired variety on Rupestris root, either in the field or in the nursery. In cases where plantings are only semi-permanent the use of resistant roots may not repay the extra cost. In this case, cuttings are rooted direct. Inter-planting of trees and vines is an illustration of this case. Such inter-planting must be done conservatively in view of the objectionable encroachment of the vines upon the resources of the trees.

Care of Vineyard—The vineyard should receive two plowings, the first away from the vines and the second toward them. The ground around the vines is usually hoed by hand. The vineyard is then cultivated from 2 to 4 times, depending upon local conditions. In the winter, when the vine is dormant, pruning should be done. The canes are cut back, usually leaving two buds to the cane. It is also necessary to spray the vines with sulphur on account of mildew. Usually one or two sulphurings are sufficient. Some varieties, such as the Carignane, are more susceptible than others. The danger of Phylloxera has been overcome by grafting on resistant roots.

Harvesting—Picking begins during the latter part of September and is at its height in the middle of October. Ripeness is determined by sugar content, average 22%. Cost of picking is about \$4.00 per ton.

Marketing—Practically all grapes are shipped to Eastern points, the fruit being contracted for previous to or at picking time, by shipping firms. A small quantity is shipped independently on consignment by large growers. Prices for the past two years have averaged \$90-\$100 per ton, except during one period of car shortage.

Yield—The average yield is about 2 tons to the acre, though a well-kept vineyard on some lands will yield 5 tons or over.

Table Grapes—The grape acreage includes several hundred acres of table grapes, of the choicest varieties, which do exceptionally well in portions of the eastern foothills and in the foothills and mountains on the west side of the valley. From the vineyards near Wrights late varieties are shipped up to December. Table grapes are profitable if placed on the market in good condition.

HAY AND GRAIN—

Extent of Crop—For many years orchards have been steadily encroaching on the hay and grain lands in this valley, until at the present time the hay acreage, including alfalfa, is something less than 40,000 acres, and that of wheat, barley and oats only 25,000. Most of the general farms remaining are in the southern section of the county. Soil and climate throughout the valley are suitable for hay and grain, and many years ago they were the chief productions.

Prices—For several years hay has brought good prices to the farmers, and during the past year the price has averaged \$17 a ton; the yield is from 2 to 3 tons to the acre, and the cost of production about \$12 per acre. Barley this year (1923), averages \$1.15 per sack of 112 lbs. and wheat \$2.00 per sack of 135 pounds; barley will run from 20 to 40 sacks to the acre, wheat less, but good yield; cost of production, about \$15 per acre.

OLIVES—

Although one of the oldest olive groves in California—the Quito—is located in this county, and another that was planted 35 years ago—the Pala—the local olive industry is of little importance commercially. This is due to the fact that the olive has not proved nearly as profitable as prunes, apricots, etc., hence there has been little planting of the olive tree during all these years. However, considerable olive oil and also pickled olives, both green and ripe, have been produced here, but at present the production is negligible, nor is there any probability that any large plantings will be made in the future,

so long at least as there is more money in other fruits. In addition to these two orchards, and the Mt. Hamilton Orchard, many olive trees are scattered throughout the valley, by roadsides, and here and there in orchards of other kinds of fruit, and in old vineyards. The Mission Fathers planted the first olives in the valley.

PEACHES—Authority: E. L. Fellows, Saratoga.

Extent—There are in Santa Clara County about 475,000 peach trees, or approximately 5,300 acres, one-third of which are clingstone and two-thirds freestone varieties.

Yield—The average yield of peaches in properly cared for orchards is 8 tons per acre.

Prices—With the exception of one recent year, when canners paid from \$35 to \$50 for clingstones and from \$30 to \$35 for freestones, for five years the clingstone varieties have brought an average price of \$75 per ton and the freestone varieties from \$55 to \$90 per ton, according to varieties and time of the season for canning and shipping purposes. Last season (1922), the California Canning and Peach Growers' Association fixed the prices on canning peaches at \$60 for all first-grade clings, \$45 for Lovells, and \$40 for all other freestones. Shipping peaches gave growers from \$50 to \$60 per ton.

Markets—Most of the peaches go to the canneries; comparatively few are dried. Fresh peach shipments for local, San Francisco, Oakland and Los Angeles markets have developed into a very large demand in the past few years, consuming the largest portion of the freestone varieties, owing to the fact that Santa Clara Valley peaches have superior shipping and keeping qualities and a much finer flavor than peaches grown in heavily irrigated sections.

Climate, Soil—The ideal soil for peaches is a light, deep, sandy loam, well drained, but it will thrive fairly well in heavier soils, if the drainage is good, which latter is indispensable, as the tree, although requiring considerable moisture, will not survive if planted in retentive soils without drainage. Good peach soil is found in many sections of this valley, and in such soil peaches make a better average yield than any other kind of fruit and are almost a sure crop. There are here and there peach trees 35 years old that have produced as high as 17 tons to the acre and are now yielding 9 to 11 tons per acre of unexcelled quality, and these trees continue to show a vigorous response to the deep rich soil so well adapted to their health and productive powers.

In California, when planted in the right soil and properly treated as to cultivation and water, the peach is a long-lived tree.

Cost of Production, per acre—

Trees, 100 at 40 cents.....	\$40.00
Plowing and Cultivation.....	30.00
Irrigation	22.00
Pruning	30.00
Spraying	8.00
Harvesting	40.00
Propping and thinning.....	40.00
Fertilizing	10.00
Total	\$220.00

PEARS—Authority: V. T. McCurdy, San Jose.

Sections—The sections of Santa Clara Valley particularly adapted to the production of pears are the heavy black lands situated near the southern end of San Francisco Bay, which extends for several miles into this valley. The bulk of the pears are grown near Agnew, Santa Clara, Lawrence, Alviso and Sunnyvale, but many pears are produced also in sections of the mountains west and southwest of the valley.

Soil—The pear produces best in a heavy damp soil, but any good heavy rich soil in this valley, with plenty of water, will grow pears of fine quality. Perhaps the adobe that is overlaid with a layer of sediment is the ideal soil, as the sediment makes the soil more friable. Cover crops of vetch and clover are sown by many pear growers to improve the physical condition and also to add humus and nitrogen. Pears will tolerate more alkali and water than any other fruit tree, but fortunately there is very little alkali in this valley. In the sections where the pear produces to the best advantage the water level is very close to the surface.

Climate—The climate is admirably suited to the production of this fruit; the frosts are usually over before the blossoms are out and the crop is harvested before the winter rains begin. The cool winds and fog from the bay are very desirable, because the great enemy of the pear, the blight, flourishes only in a hot, dry climate.

Varieties—The Bartlett is preferred by some growers, because it can be dried, canned or shipped green. Others like the shipping varieties, as they can be kept in cold storage indefinitely and shipped under refrigeration to all parts of the United States and to foreign countries, where there is a good demand for these pears. Such varieties as the Winter Nelis, Easter Beurre, Beurre Hardy, Beurre Boce and Du Comice do well in this valley.

Diseases and Pests—This county is greatly in favor, because the pear blight has never got a foothold here, due doubtless, as noted above, to local climatic conditions. The codling moth and a number of scales are readily kept in check by the use of proper sprays, at the right season.

Planting—The trees are planted during the spring, the exact time varying with the year and local conditions; they are planted 20x20 feet to 24x24 feet, determined by the individual grower. The trees are either budded or grafted on the wild pear root, although recently quince root has been used to a considerable extent, in spite of the fact that it dwarfs the trees. Some experiments seem to show that the table graft is preferred to the budded stock. The cost of young trees is about 40 cents each, when bought in lots of 100 or more. It is good practice to dig the holes several months before planting, allowing the soil to aerate.

Cultivation—The pear soil in these sections is so heavy and wet that the spring plowing is usually not commenced until March. This permits the cover crop to come up well before being turned under. After the plowing is finished the soil is worked into a mulch either with a harrow and clod smasher or a double disc.

Pruning—The pruning is done during the winter when the tree is dormant, usually by experienced day labor, at a cost of about \$3.50

per day. The average cost for a full bearing orchard is approximately \$22.50 per acre for Bartletts and \$27 to \$28 for winter pears.

Spraying—The spraying is begun in winter, when the trees are dormant, either with lime-sulphur or oil emulsions, to keep the scale pest under control, followed with Bordeaux to control the fungus. The next spray is the poison spray for the codling worm, arsenate of lead being used; this spraying is done just after the flower petals fall and the calyx is opening up, to be followed by another within ten days before the calyx has closed, and again some three weeks later, making a total of five sprayings for all purposes, and many growers spray five times with the arsenate of lead for winter varieties. The cost per year for spraying is about 60 cents per tree. Good orchards justify these expenditures.

Irrigation—The usual practice is to irrigate three or four times, depending somewhat on the season. The first irrigation is in the spring, after the first spraying. Then, either one or two irrigations before picking and one after the crop has been harvested. Some growers irrigate more than this, but good results are obtained by the above method. The average cost is about \$3 for each irrigation; many irrigate from local streams, but the majority by means of wells, and the cost of a good well thoroughly equipped is approximately \$5,000, depending upon the depth; in some sections the water is comparatively near the surface, and in others it is necessary to bore to a considerable depth.

Harvesting—Picking is begun in the latter part of July or the first week in August, the valley pears ripening some time ahead of the mountain pears. The pears are all picked for size, for the canneries, $2\frac{1}{2}$ inches in diameter being No. 1 as to size and $2\frac{1}{4}$ inches No. 2. The orchard is usually gone over from two to four times, about a week between each picking. The pickers are hired by the day, the average wage being \$3.50 a day, for 10 hours work. The number of boxes picked by one person varies considerably, depending a great deal on how the crop is set. Thirty to 50 boxes would be the average pick, probably nearer 30 than 50. Figuring 30 boxes per day per man, the cost of picking is about 11 cents a box of 50 pounds, or about \$5 a ton.

Yields—A good yield from mature trees is 15 tons to the acre in the best pear section, and there are exceptional orchards where the yield has been as high as 30 tons; the mountain orchards, however, which are not irrigated, do not bear so heavily.

Markets and Prices—The majority of the Bartletts are sold to the canners. The prices received by the grower are usually rather high, as the fruit is of the best quality and there is a wide demand for it, ranging normally from \$60 to \$75 per ton for $2\frac{1}{2}$ -inch pears and 25 per cent off for $2\frac{1}{4}$ -inch pears; seconds bring from \$25 to \$30 a ton. Shipping pears (winter varieties), frequently net much more than the best prices for Bartletts.

Life of Tree—Pear orchards in this section that are 30 years old are still in their prime; the yield increases until they have reached the age of 25 years. Though slow to mature, the pear tree is very productive and profitable.

Cost of Caring for Orchard:

Plowing and Cultivation, per acre.....	\$13.00
Pruning, 100 trees to acre, average.....	25.00
Spraying	60.00
Picking	75.00
Irrigation	9.00
Hauling, sorting, etc.....	37.00

Total\$219.00

Price of Land—Good pear land costs from \$300 to \$500 an acre and good orchards range in value from \$1,500 to \$2,000 an acre; none of the first-class bearing orchards are for sale, as they have proven so profitable.

PRUNES—Authority: E. N. Richmond, San Jose.

Santa Clara County means prunes. Prunes means Santa Clara County. One is so closely associated with the other that the thought of one brings the thought of the other. This county produces approximately one-half of all the prunes produced in the United States. The average yield of the past several years has been 120,000,000 pounds, this amount being about a normal crop. Many districts of the county are planted solidly to prunes and other varieties of fruits, there being no vacant land available for further planting. Other localities are more scattered and there are still available lands for future planting, but this land is being rapidly absorbed as fruit land. Plantings extend well up on to the foothills on either side of the valley, but the best producing orchards, which represent the majority of orchards, are on the floor of the valley and extend south as far as Gilroy, the southern section of the county.

Soil—Prune trees require a rich, deep, sandy or loamy soil, and from that to a heavy soil well drained. The lighter soil is better adapted to apricots and peaches, although during the past few years water has been developed through pumping plants and this light soil which in the past was considered not very good prune soil today produces good crops and a fine quality of fruit. Prune trees, when planted to the proper soil, will produce large thrifty trees, capable of producing a large quantity of fruit, and it costs but little more to work an orchard of large trees where planted to a good soil than to work orchards of small trees when planted to the lighter soil. Generally, on soil as described above, an available supply of water is to be found. Prune trees are planted from 22 to 24 feet apart.

Climate—In this section the climate has relatively low humidity with good warm summer days through the months of July, August and September, which makes it ideal maturing and drying weather. The proper temperature during the stages of maturity is a very important factor toward the size and quality of the fruit. In this relation this county is superior to all others. The trees blossom during the latter part of March and the forepart of April, and the climatic condition at the time of blossom is a very important factor in the setting of the crop. It is very seldom the prunes are affected by frost, the greater danger of damage being from hot weather combined with sudden changes to cold, or extreme hot weather during the period when the fruit is in full bloom, which seems to tend toward scalding

young fruit. All varieties of fruit have Spring weather conditions with which to contend. We believe our conditions to be less severe with the normal conditions which exist, than many other fruit growing districts. The fact that the prune industry has assumed a larger proportion in this valley than in any other section, speaks more for the adaptability of the climate for growing prunes than anything that could be written.

Irrigation—For all production of fruits WATER IS KING. While the rainfall over the floor of the valley varies from 15 to 20 inches annually, yet the common practice is to irrigate, in order to secure the largest and most continuous yields of best quality fruits. Practically all water for irrigation purposes is taken from wells, there being a few exceptions where water is taken from the streams of the valley. The method most common for irrigation is to lay off the land in checks or squares around each tree, in order to be able to hold the water thoroughly and saturate the ground. Recently, however, the method of furrow irrigating is becoming more popular and orchardists are piping their land with concrete pipe lines with outlets through stand pipes. This method is preferable to the check irrigating. A reasonable cost per acre for irrigating, including power, preparing the ground, labor and laying the ground for irrigating would be between \$7.00 and \$8.00 per acre. The general practice is to irrigate twice a year, once during the late Spring months and once immediately after the crop has been taken from the tree in the Fall months.

Cultivation—The general system of cultivation is to plow anywhere between the first of March and the middle of April, the time being dependent upon the class of soil, weather conditions, and whether you are preparing a green manure crop or not. Plowing should be done from eight to ten inches. This depth is more readily reached through the use of tractors and the present-day methods than during the time when we were entirely dependent upon horses. Following the plowing the land should be thoroughly harrowed and worked, and cultivation should extend well into the early summer months, as through cultivation you are able to maintain your moisture conditions. The cost of plowing and cultivating varies very much, dependent upon the character of soil and the number of times which the ground is covered. Plowing can be done for \$3.00 per acre, and cultivating \$1.00 and \$1.50 per acre, according to the implements used. One should not figure on less than \$10.00 per acre, and in many instances where the ground is properly and thoroughly worked, up to \$15.00 per acre.

Pruning—During the Winter and Fall months the trees are pruned. Some orchardists prune every year, others every other year, this being a matter of preference. The average cost of pruning and cleaning away the brush from those orchards producing large trees will be approximately 30c per tree. As the orchards average about 90 trees to the acre this would be \$27.00 per acre.

Spraying—Spraying is an important item in the care of an orchard. The bark of the tree should be kept clean, free from moss and scales. The most popular sprays in use are the Crude Oil Emulsion, Distillate Emulsion and Lime Sulphur Solution, also Bordeaux Mixture, the kind of spray to use depending upon the object of the

spray, the cost of spraying also being dependent upon the results you are trying to accomplish.

Diseases and Pests—The prune producing business is not free, by any means, from diseases and pests against which one must always be prepared to fight, the principal of which are thrip, borer, canker worms, Italian pear scale and the brown apricot scale. All of these attack either the fruit on the tree or the tree itself and each has its own particular treatment. In the working of an orchard one must provide for at least \$15.00 or \$20.00 per acre for coping with some pests.

Fertilizing—Producers of all types of fruit are realizing that fertilizing is an important item in the care of an orchard toward making it a successful producer, although it is an item which is overlooked by many producers. The most common fertilizer is the green manure crop. This is usually a crop of vetch, melilotus or burr clover, or some other green manure sown for the purpose and plowed under during the Spring months. These crops by means of bacteria on the roots take nitrogen from the air and restore it to the soil. They also, through their own decay, add humus and life to the soil. Among the commercial fertilizers nitrates and potash are the most commonly used, in addition to a number of well-known mixed commercial fertilizers. The cost of commercial fertilizing varies from \$8.00 to \$20.00 per acre, dependent upon the previous fertilization and the kind of fertilizer used.

Harvesting—Prunes are ready for picking about the middle of August and the picking season covers a period of four weeks. The fruit, when ripe, is a deep purple color. It is allowed to fall to the ground of its own accord, at that time having reached full maturity. The orchard is picked over about four times, once every week. During the last picking the trees are shaken so as to get all the fruit to the ground. The fruit is hauled to the dipping shed in picking boxes and there passed through a process of boiling water with sufficient lye added, so as to crack or check the skin, this checking process being necessary to facilitate the drying and prevent fermentation of the fruit. The dipping processor is a kettle or tank holding 200 gallons of water and containing a basket container which holds about a box of fruit. There is another type of processor known as the spiral processor used in the larger dry yards, but the principle of handling is the same. In many instances the fruit is rinsed in a vat of clear water or water spray after coming out of the lye solution. There is generally used in conjunction with the dipping a pricking board and grader, the pricking board for the purpose of checking the skin of those prunes which were not checked through the lye, and the grader for the purpose of segregating the fruit into three sizes so as to have a uniform condition for drying. The prunes are placed on trays and hauled to the drying yard, where the trays are spread out on the ground and subjected to the sun and heat.

When the drying process is well along, the time of which varies, according to weather conditions and temperature, from one week to twelve days, the trays are stacked containing about 15 or 20 trays to the stack. From there the fruit is sorted for any soft or defective fruit, and the fruit is hauled to the producers warehouse. The picking of the fruit from the ground is usually done by contract, prices during

the past several years ranging from \$4.50 to \$7.00 per ton. This work is done by various classes of people, in many instances by school children during their vacation, by transient families, but very largely by Italian families. Actual drying costs of the drying yard on a well-managed yard vary from \$4.00 to \$5.00 per ton, although during the few years in which weather conditions are bad this can readily be increased by at least \$1.00 to \$2.00 per ton, as the trays are stacked if weather condition requires and later on have to be put out again. This situation may be duplicated a number of times each season and adds to the cost. The average shrinkage is about $2\frac{1}{4}$.

The care of an orchard consists of soil cultivation, pruning, spraying, irrigation, fertilizing, harvesting. Miscellaneous expenses which will always accrue about any orchard, whether it is prunes or other varieties of fruit, should be considered at not less than \$4.00 per ton. The cost then of working an acre of land would be as follows:

Soil Cultivation	\$15.00
Pruning	27.00
Spraying (alternate year) per year.....	12.50
Coping with Pests (estimated).....	15.00
Fertilizing	10.00
Harvesting (2 tons).....	47.35
Miscellaneous Expenses	4.00
Total	\$130.85

The price of good orchard property varies, according to locality and improvements, from \$1,000 to \$2,000 per acre.

Fruit Prices—During the past number of years the general average of price for dried prunes has been from $7\frac{1}{2}$ to 8c basis. The average size would be 65 to the pound, which would be equivalent to a price per pound, based on the 8c basis, of \$175.00 per ton which, under average crop conditions, makes prune producing on good property a very remunerative business.

TOMATOES—Authority: Frederick Devenpeck, of the California Packing Corporation.

Sections—Tomatoes are grown chiefly in the northern half of the county, from Coyote to Milpitas on the east side and on the west side to the northern county line. Proximity of canneries and availability of water supply are the determining factors in each district.

Soil—The soil in which tomatoes are grown is any good soil with sufficient water supply, as tomatoes require from three to five irrigations according to the soil's capacity to retain moisture.

Climate—The tomato is susceptible to frost, and it is not planted until the latter part of April, after danger of frost is over. It grows and produces until the winter frosts kill the vine.

Propagation—The seed is planted during the period from January to March, in cold frames or hot-beds, about two ounces of seed being required to produce a sufficient number of plants for an acre. The frames are covered with cloth to protect the young plants from the weather conditions, and the cloth is gradually removed until the young plants harden. The plants are set out during the latter part of April or the forepart of May, five to seven feet each way. One man can plant about an acre a day.

Irrigation—Water should be applied to plants when needed. It is good practice to get plenty of moisture into the soil when the plant is young, as too much water after the vine begins to bear will cause it to produce a soft, watery tomato.

Cultivation—Cultivation is constant until the vine becomes too large. By planting in squares, the vines can be cultivated two ways, but later on they are hilled up and worked only one way, after the second irrigation.

Yield—The yield from tomatoes varies from 8 to 20 tons per acre. About 10 tons is the average.

Price—The crop is sold to canneries, and the usual price obtained by the grower is \$10 per ton; some seasons prices have been higher; last year (1922), the price was \$15 per ton.

Harvesting—Harvesting begins the latter part of August for cannery tomatoes and continues until frost stops the growth, some time usually in November. The field is picked over once every week or ten days. The cost of picking is from \$2.50 to \$3.00 per ton. Japanese, Italians and others will contract to plant, cultivate, irrigate and pick the crop for 50 per cent of the crop or gross proceeds, and this is a satisfactory method of growing the crop.

Cost of Production—when the yield is 10 tons to the acre:

Plowing (twice), and preparing land for production	\$10.00
Plants	7.00
Planting	4.00
Cultivation, four times	4.00
Irrigation, three times, average cost	30.00
Picking, 10 tons at \$2.50	25.00
Total	\$80.00

VEGETABLES (EARLY)—Authority: L. P. Lacerda, East Side, San Jose.

Sections—The early vegetable industry has grown to large proportions in this valley during the past several years, especially on the East Side, in the territory along the foothills reaching from Milpitas to Evergreen, Linda Vista being the central point between. The largest portion of the crop is grown on the hillsides, having an eastern or southern exposure, and in a belt that is practically frostless.

Soil—The hillside soil is a clay loam, in which nearly all the early market vegetables are grown; lower down, along the edge of the valley, especially in the vicinity of Milpitas, the soil is a heavy black loam, and here most of the canning peas are grown.

Planting—Early market peas, potatoes, corn, beans, etc., are planted usually in January, sometimes earlier, and they develop rapidly in the warm sunshine of the foothills. The canning peas are planted in the Fall, after the first rains, or later. Three or four cultivations are usual, and this is done mostly by hand. There is no irrigation.

Varieties—The earliest and most profitable varieties are: Table peas, the Laxton; canning peas, the Laxton in the foothills and the Telephone in the valley; potatoes, British Queen and Early Jackson.

Harvesting—Harvesting of table peas and potatoes begins about the middle of March, and of corn and canning peas in June. Of course, in the many commercial truck gardens in the valley vegetables of all kinds are grown practically all the year around, but this article is treating solely of the foothill early vegetable industry.

Markets and Prices—San Jose, Oakland, San Francisco and the several Bay cities provide a near-by market, that is always dependable. The products are shipped by auto trucks and by railroad. The first table peas sell as high as \$15 a sack of 70 pounds, and the average price to the grower for the season is 9 cents a pound. Canning peas will average $2\frac{1}{2}$ cents a pound. Potatoes average 5 cents a pound to grower, and corn \$10 a sack of 8 to 9 dozen down to \$1.50 a sack. The net profit to the grower on all these vegetables is from \$200 to \$250 an acre. The majority of the growers are members of the East Side Vegetable Growers' Association, which handles their crops.

Remarks—The early market crops are grown almost entirely by Portuguese, 75 per cent of whom own and operate their own small vegetable farms, and for their early crops last year (1922) they received more than \$30,000; this does not include the canning peas farmers. Renters pay one-third of the crops to the owners of the land for its use. Many of the foothill farmers have planted orchards, and until the trees come into bearing early vegetables are grown between the rows.

WALNUTS—Authority: Frank Leib, San Jose.

Soil—To get the best results, deep, well-drained soil is most essential, as the walnut tree, especially when grafted on selected California or Royal roots, is a rapid growing tree, which reaches majestic proportions in a comparatively short time. It is rather intolerant of alkali. Surface water nearer than six feet for any appreciable time in the year is deleterious; 12 to 20 feet is ideal.

Climate—From Mexico to Alaska there cannot be found a climate more ideally suited to the requirements of our best varieties of late French nuts, such as Eureka, Franquette, Mayette, etc. Our mild winter cold comes when the trees are dormant and does no harm, and early frosts, after May, are fortunately extremely rare. In 17 years of walnut culture our frost damage has been almost negligible. Foggy cold summers and summer rains that cause blight conditions are lacking here, nor does it ever get hot enough to sunburn the nuts, where there has been proper irrigation and cultivation. Winds, which in the summer prevail mostly afternoons from the north, are not sufficiently strong to make it difficult to grow straight trees, with the aid of stakes used in the early growth of the trees.

Varieties—In the Santa Clara County exhibit at the 1915 Panama-Pacific International Exposition, at San Francisco, this county was awarded eight first prizes on French varieties of walnuts, as Eureka, Franquette, Mayette, etc., also on the Payne variety, of local origin, and a great favorite with many growers. Given proper roots, soil, irrigation and care, any of these four varieties, and some others, reach perfection in this valley and are a great commercial success.

Propagation—We find that, as in other fruits and nuts, seedling walnuts give poor results as compared with grafted trees, where scions are taken from the very heaviest bearing trees, and selected thrifty

California Black or Royal roots are employed. The result is a fast-growing tree, bearing early and consistent crops of uniform nuts. Trees are planted from February to April 15; the earlier planting is preferable, however, in most seasons.

We advise in this valley planting trees from 40 to 60 feet apart, depending on the richness of the soil. Nursery stock at present prices would cost from \$18 to \$40 per acre, depending on whether 12 or 27 trees are planted to the acre.

Care of Orchard—If late leafing varieties are used, blight, which is the most serious menace in the South, practically is negligible here. Damage by aphids is quickly and cheaply prevented by use of dusting with 20 per cent Nicodust, a product manufactured by the California Walnut Growers' Association. A deep winter and summer irrigation is essential to the best results. Deep and frequent cultivation pays handsomely, although not absolutely necessary. Pruning, while necessary in the formative period of the tree, is not expensive, as there are comparatively few trees to the acre. When trees are full-bearing very little pruning is required.

Yield—Nursery grafted trees bear in from four to six years, practically doubling their yield for 12 years or more. Our present practice is to grow Royal black walnuts for six to eight years, and then graft high up on the main limbs, grafting one-third each year. This gives for greater crops in the long run. A yield of 1,000 pounds to the acre on a 12 to 15-year-old tree orchard is a satisfactory yield. At present prices this would amount to about \$300 per acre, with expenses about \$100 per acre. This yield should increase for many years, as the walnut tree is very long lived. One tree I have in mind that has produced as many as 900 pounds of nuts in its fortieth year.

Harvesting—Harvesting commences from about the first of October to December 1st, which is ideal, as labor is most available during this time. Women and children figure largely in the picking and men and women in the shaking and packing operations. From three to four pickings are necessary. There is at present a very efficient packing plant, a branch of the California Walnut Growers' Association, at Santa Clara, in this valley. This plant handles the nuts and gets the best possible prices for them. Prices at present run from 26 to 32 cents per pound, depending on variety and quality of nuts.

Remarks—The walnut grove is slow to reach maturity, but is very long lived and bears very consistently. It is possible to interplant with either vegetable crops or fruit trees. Suitable land in this valley varies from \$350 to \$1,000 per acre, the higher prices being for the very best of truck soils, with ample water, enabling the owner to grow vegetables, etc., for a number of years in the young growing grove. The walnut acreage, now more than 2,000 acres in the county, is steadily increasing from year to year.

INDUSTRIES

BEEES AND HONEY—Authority: L. R. Cody, Horticultural Commissioner, former Bee Inspector.

The production of honey commercially in the valley is rather limited, but the rearing of queens and the sale of bees is quite an industry. The climate of this section is admirably suited to this busi-

ness. The mild winters and early feed have a tendency to start the bees laying and hatching early in the spring. The fruit blossoms make an excellent and very early feed. Hence, by the time feed is starting in Nevada and other cold regions, the bees are already working and busy collecting honey. The bees are sold to the honeymen of these colder sections either by the pound or by the colony. Colonies sell for \$3.00 to \$7.50 each. When sold by the pound, the cost varies from 75c to \$1.25, depending on the quantity sold. There are about 50,000 bees to the hive, but the number varies; in the spring and summer there are twice as many as in the winter. It takes approximately 5,000 bees to make a pound. Bees are marketed in April, May and June.

Rearing Queens—The rearing of queens is a separate industry and needs care and technical knowledge. They sell for 60c to \$10, depending on the quality. The market for queens is from March to October. The bees and queens are shipped anywhere in specially prepared crates, containing food and water. The reason that this valley is an excellent breeding place and still a poor honey producer is due to the fact that while there is plenty of feed the year round, it is not of the best quality for making a light colored honey. After the first blossoms, the bees work on the eucalyptus, pepper trees, and hoarhound, all of which impart a disagreeable flavor and color to the honey. However, it is as good for the bees as the finer honey. The climate is an important feature in the raising of bees, because they get started here several months before they do in the colder sections.

Varieties—The Italian bee is the favorite. It has a gentle nature and is more resistant to foul brood. It will clean up European foul brood, which no other variety will do. There is a bee inspector in the county who regularly inspects the hives and this careful attention prevents any serious spread of disease. Bees are one of the most important factors in the fertilization of fruit blossoms and it is largely due to the increased number of bee-keepers in the county that our fruit crops are increasing. It is estimated that there should be at least one hive of bees for every acre of orchard.

CANNING INDUSTRY—Authority: Elmer E. Chase, President of Cannery's League of California, San Jose.

Santa Clara County has become the center of the fruit canning industry, not only of California, and of the United States, but of the whole world. At least 30 per cent of the total of California's canned fruit output is canned in this county, and fully 50 per cent of the fancy canned fruits goes into cans in this county. Of the 40 or more canneries in the county, 24 are located in San Jose. More varieties of deciduous fruits suitable for canning grow to perfection in Santa Clara valley and adjacent foothills than in any other section of the State, and in no other place in the world can cherries and apricots, as well as pears, peaches, plums and tomatoes, be grown that for canning purposes will compare with those of this favored valley. The local canneries handle not only all kinds of deciduous fruits, but also berries and vegetables, and much Italian tomato paste is made and canned here.

The Santa Clara county pack of canned foods averages annually more than 3,000,000 cases, and if placed end to end the cans would

reach from San Jose to New York and back half way to San Jose. The cases average two dozen cans to the case, making 72,000,000 cans, and at twenty tons per carload approximately 4,000 cars are required to load the pack. So important is San Jose as a canning center that the American Can Company has here a factory with a capacity of half a million cans per day to meet the cannery requirements, and two local factories—the Anderson-Barngrover Company and the Smith Manufacturing Company—manufacture every kind of fruit handling and cannery machinery, supplying not only this district but also all domestic and foreign markets. Eighty per cent of the canned fruits is sold in domestic markets and 20 per cent in Europe and other foreign markets. The local canneries pay out approximately \$2,000,000 annually for labor and about \$6,000,000 to fruit growers for fruit, berries and vegetables for canning purposes. Santa Clara County has a world-wide reputation for her canned goods that is unequalled by any other section.

Following is a list of the canneries in Santa Clara County:

- ALVISO—Bayside Canning Company
- CAMPBELL—Ainsley Canning Company
 - California Canneries
 - George E. Hyde & Co.
- GILROY—H. A. Baker Cannery
 - Felice & Porelli
- LOS GATOS—Hunt Bros.
- MAYFIELD—Foon Canning Company
- MILPITAS—California Packing Corporation
- MONTE VISTA—Monte Vista Packing Company
- MOUNTAIN VIEW—California Supplies Company
 - Clark Canning Company
 - Concentrated Tomatoes Company
 - Northern California Packing Company
 - Foothill Canneries Company
- SUNNYVALE—Libby-McNeil & Libby
 - Sunnyvale Canneries
 - George H. Hook Company
- SANTA CLARA—Diana Preserving Company
 - Pratt-Low Preserving Company
 - California Jelly-Juice Company
- SAN JOSE—Alba Canning Company
 - Beechnut Company of California
 - Bisceglia Bros. & Co.
 - Cooperative Canneries
 - California Prune and Apricot Growers', Inc.
 - California Packing Corporation (three plants)
 - Coast Products Manufacturing Company
 - Di Fiore Canning Company
 - Flickinger Fruit Company
 - Greco Canning Company
 - Herbert Packing Company
 - Herschel California Fruit Products Co.
 - Hunt Bros.
 - Italian Canning Company
 - Pyle, J. F. & Son
 - Richmond-Chase Company

SANTA CLARA COUNTY, CALIFORNIA

San Jose Canning Company
Santa Clara Valley Canning Company
Shaw Family, Inc.
Sunlight Packing Company
United States Fruit Products Company
Virden Packing Company
Wool Canning Company; also
San Jose Ravenna Paste Co., (tamale cannery).

CATTLE (BEEF)—Authority: O'Connell Bros., Inc., San Jose.

Sections—During the past few years the beef industry has made rapid advancement in Santa Clara County. While the county is eminently a fruit growing section, the Mt. Hamilton range of mountains on the east and some parts of the western foothills near Almaden and in the Llagas and Uvas districts are devoted to stock raising. These mountains comprise an area of 450,000 acres or more, and they afford a practically open range for stock, including some fertile mountain valleys suitable for hay. The ranges nearer the valley, generally speaking, have more feed, more water, and are closer to transportation than those farther back; the grass on the latter is stronger and less washy than on the front ranges but not so plentiful.

Range Prices—The selling price of ranges nearest the valley is from \$20 to \$35 an acre; these ranges are mostly over 1,000 acres. On the back ranges the holdings are from 5,000 to 50,000 acres, and the selling price of these is \$10 per acre and up.

Raising Cattle—Stock raisers who breed and raise their cattle have eliminated the poorer grades and have brought their herds up to a higher standard. The principal cattle raisers purchase well-bred yearlings and two-year-olds, in Arizona, New Mexico and Nevada, and develop them in this county. As a result of good breeding, and the purchase and development of high-grade cattle, the beef in Santa Clara County is sought by packers in Portland, Oregon; Los Angeles, San Francisco and other Pacific Coast markets. In the spring of 1921, a boatload of fancy beef was shipped from this county to Alaska, the beeves averaging 1,455 pounds after three per cent shrinkage. Some cattlemen buy dairy calves and raise them on the range, by means of nurse cows and commercially prepared calf's feed, but this practice of late is little followed. The cattle industry in this county centers chiefly around Gilroy, San Martin and Madrone.

Quantity and Prices—During the year 1921 approximately 25,000 head of beef cattle were shipped from this county. From June 1, 1921, to May 31, 1922, there were inspected and slaughtered in San Jose 10,958 beeves, 14,345 sheep, 3,564 hogs and 28 goats. For several years high prices for first-class beef have prevailed, and the prospects are that they will continue to bring from \$60 to \$100 per head, and more. Although necessarily limited by the extent of range available in the county, no local industry promises more assured returns than that of cattle raising.

CATTLE (PUREBRED)—Authority: De Lancey Lewis, President of The Lewis Company, San Jose.

Several important factors have tended to increase the number of purebred cattle raised in Santa Clara County, among them being an even climate, ease of production of all dairy feeds including alfalfa,

cow beets, vetch and silage. Corn and sunflower silage are commonly raised and one of the cheapest feeds which is used extensively is pea vines, which are a by-product in the canning of peas in the numerous canneries of the county. This valuable feed is available at about \$3.00 per ton.

A second important point of advantage is the closeness to the extensive markets of San Francisco and the other bay cities where milk is delivered within a few hours either by train or truck. From the standpoint of registered cattle, this closeness to San Francisco is also of great value in connection with the export trade. Within the past few months shipments have been made to Chili, Mexico and the Hawaiian Islands. Foreign buyers are usually in the market for top animals at good prices so that this trade is extremely desirable.

Most of the registered dairy cattle are of the Holstein breed and the growth and popularity of this breed is well evidenced by the fact that there are now thirty members of the Holstein Freisian Association in Santa Clara County, extending from Palo Alto, where there are several important herds, to Los Altos, Lawrence, College Park, San Jose and to Gilroy on the south. Weather conditions are ideal for health as well as consistent production and the latter condition has assisted in making a number of world's records for yearly production in both milk and butter.

The herd of Toyon Farm Association at Los Altos has within the past few years numbered over three hundred registered females, and has supplied bulls to many of the best known California breeders.

The M. M. Holdredge herd, established many years ago at Modesto, and which made some of the first large records made in the West, has been moved to this county and located on the northern outskirts of San Jose.

At Lawrence Station a herd of about sixty-five head is maintained by The Lewis Company as a branch of their Baywood herd, other units being located at Hollister and Madera.

Palo Alto Stock Farm, E. M. Brown, Captain Williams and Dr. Ketchum are prominent in Palo Alto and vicinity.

At College Park, M. J. Haas has started a plant with an excellent foundation of about twenty high-class females.

Most of the other breeders are starting with a few head and gradually developing important breeding establishments.

DAIRYING—Authority: D. W. MacNair, San Jose, formerly connected with the Dairy Service, State Dept. of Agriculture.

Sections—Santa Clara County ranks third among the counties of California in production of cheese, but only 13th in butter fat production. The local dairy industry, however, is important and growing, the leading dairy sections being in the lower lands of the valley, between San Jose and the Bay, embracing the country around Milpitas, and in the Gilroy country in the southern end of the valley. There is ample water supply at comparatively small expense in these two sections, and alfalfa can be more economically utilized for feed, but there are dairies also in various other parts of the county.

Breeds—The favorite dairy cow is the Holstein; many dairies have pure bred bulls and herds of pure bred cows, but there are also

many grade cows, such as Jersey-Guernseys and Jersey-Durhams, and the standard is continually being raised at the leading dairies.

Feed—Alfalfa is the general feed, and from four to six cuttings are made during the year, yielding from 6 to 7 tons per acre. Each cow is fed about one-half a ton per month. Silos are coming into more general use, and those that are using ensilage are greatly in favor of it, particularly as more feed can be produced on the same acreage by this method, and the cost of feed is a large item in sections where the price of land is high. In the Milpitas section, where canning peas are grown extensively and canned, pea vines serve as quite a factor in the dairy feed. Silos may be of wood or concrete, and an 80-ton silo will serve for a herd of 25 cows, and complete, with the cutter and blower, will cost about \$800.

Markets—In the northern section of the county nearly all of the milk is market milk, going to San Francisco, San Jose, and the Peninsula cities, to the wholesale milk trade; in the southern section a comparatively small quantity is sold in Gilroy, and approximately one-half of the bulk of the milk produced there is sold to the condensery at Hollister and the other half to the local cheese factories, although some of the dairies manufacture their own cheese. The annual dairy productions for the county average about 3,100,000 pounds of butterfat, nearly half a million pounds of butter, and approximately one million pounds of cheese, exclusive of cottage cheese. One hundred pounds of milk is required to make ten pounds of cheese, and the price paid by the factories for the milk depends upon the price obtained for the cheese; for instance, when cheese is selling for 20 cents a pound the milk brings \$2.00 per hundred pounds; the average price paid is about \$2.10 per hundred pounds. Good average dairy cows will produce \$100 or more a year, including by-products, and will sell for \$85 to \$100 each. The average price of milk to the wholesale trade is 18c to 20c per gallon. Where whole milk is sold there is no by-product, but when sold to the cheese factories the whey is returned to the dairymen, who use it in connection with prepared calf feeds for raising young calves, which when dropped are worth \$5 each.

Remarks—The dairy business requires close and intelligent attention to details, and when thus conducted it is lucrative; it is a cash business, the money comes in monthly, and this feature enables one to begin with small capital and to increase his herd and his income quite rapidly.

DRYING AND PACKING INDUSTRY—Authority: H. G. Coykendall, Mgr. Calif. Prune and Apricot Growers', Inc., San Jose.

The Santa Clara Valley is the center of the world's dried fruit industry. From eighty-five to ninety per cent of the prunes and all the dried apricots grown and eaten in the United States are produced in California, and the Santa Clara Valley produces forty-two per cent of the State's prune crop and about fifty per cent of the State's dried apricot production. The quality of prunes and apricots produced in the Santa Clara Valley orchards is recognized by the trade as superior to most of the fruit grown in outside districts and for many

years Santa Clara Valley dried fruits have brought a higher price than the fruit grown in other districts of the State.

An average crop of prunes in the Santa Clara Valley will total 100,000,000 pounds, valued at about \$8,000,000 to \$10,000,000. The size of the dried apricot pack varies greatly from year to year, depending upon the condition of the canned goods and green fruit markets for this fruit. Over a period of years, however, the value of the dried apricot production of the Santa Clara Valley will range from \$1,200,000 to \$1,600,000.

During the picking and drying season, which for apricots is from late June until late July, and for prunes from the middle of August to the first of October, thousands of people are employed in handling the fruit through the various processes which it must go before it is ready for delivery to the packing houses. Women, school children, summer vacationists and others anxious to make extra money during the harvest season, flock to the Santa Clara Valley to earn the profitable wages which are paid for labor during the rush of the packing and drying seasons.

About three-fourths of the prune and dried apricot crops of the Santa Clara Valley is now sold through the California Prune and Apricot Growers' Association, a State-wide, non-profit, co-operative marketing organization composed of more than 11,000 prune and apricot growers of the State. This association was organized May 1, 1917. It takes the dried prunes and apricots delivered to its packing houses by its members, sells this fruit in open competition with private concerns and returns to its grower members every penny it receives for the fruit, less actual operating expenses.

Until very recently, ninety-nine and a fraction per cent of all the prunes grown in the Santa Clara Valley were sun-dried, but during the past few seasons more and more interest has been taken in the possibilities of dehydrating the fruit, and at the present time, several of the largest growers are building dehydrators to take care of their future crops.

Though prunes and apricots constitute, by far, the largest tonnage of dried fruits produced in the Santa Clara Valley, there is a limited amount of peaches and pears and a few wine grapes dried by the orchardists of the Santa Clara Valley.

Dried Fruit Packing Houses—The California Prune and Apricot Growers' Association owns and operates the following dried fruit packing plants in Santa Clara County:

- Plant No. 1, Campbell
- Plant No. 2, Morgan Hill
- Plant No. 3, Gilroy
- Plant No. 4, San Jose
- Plant No. 6, San Jose
- Plant No. 10, San Jose
- Plant No. 11, San Jose
- Plant No. 14, San Jose
- Plant No. 16, San Jose
- Plant No. 8, Mountain View
- Plant No. 13, Los Gatos
- Plant No. 41, Sunnyvale

The following dried fruit packers of Santa Clara County are affiliated with the California Prune and Apricot Growers' Association:

Warren E. Hyde, Cupertino
West Side Fruit Growers, Cupertino
George E. Hyde & Co., Campbell
Warren Dried Fruit Co., San Jose

The independent dried fruit packers of Santa Clara County are as follows:

Guggenhime & Co., San Jose
Richmond-Chase Co., San Jose
George N. Herbert, San Jose
O. A. Harlan & Co., San Jose
J. B. Inderrieden & Co., San Jose
California Packing Corporation, Plant No. 50, San Jose
California Packing Corporation, Plant No. 51, San Jose
California Packing Corporation, Plant No. 53, Sunnyvale
California Packing Corporation, Plant No. 55, Gilroy
Ainsley Packing Co., Campbell
Los Gatos Cured Fruit Co., Los Gatos
Rosenberg Bros. & Co., Santa Clara
Richmond-Chase Co., Edenvale
Lawrence Russell, Saratoga

There are, in addition to the foregoing named packing plants, several small private firms which put up a special prune and apricot pack for a limited trade.

Dehydrating and Evaporating Plants—The use of dehydrators or evaporators for fruit drying is gradually coming into favor, and in addition to a number owned by individual growers for handling their own fruit, the following plants do a general business:

Baker, C. H., Evaporator Company, Santa Clara
Bayside Canning Company, Alviso
Dee-Hi Fruit Products Company, San Jose
Mahon, Rich & Adrian (fruit and vegetable dessicating),
Santa Clara
Monte Vista Dehydrating Company, Cupertino
National Ice and Cold Storage Company, Gilroy
United States Products Company, San Jose

HORSES IN SANTA CLARA COUNTY—Authority: Walter Palmer, San Jose.

Despite the countless motor cars that throng our highways there is still a large number of our citizens who harbor the love of a horse and to all those who would gratify a desire to produce or develop an animal for pleasure or profit Santa Clara County offers inducements unexcelled by the favored blue grass sections of Kentucky. Alfalfa here reaches its highest estate, and the abundance of feed coupled with the moderate Winter temperature enables the early foals to acquire the maximum of growth which is so desired in younger animals destined for the track or show ring; in short, yearlings here assume the size and appearance of two-year-olds. These were the factors that induced Governor Stanford to establish the famed Palo Alto Farm within the confines of this county, and his judgment was justified by the production of more World's Champion Trotters than

any other equine nursery. Miramonte Farm and the splendid ranch of Chas. T. Boots are the most pretentious establishments of the present day, and they are producing thoroughbreds ranking with the best in America.

Since the days of the Padres saddle horses have been popular in California, and the ever-alluring mountain paths that can be reached in this valley by this mode of conveyance beckon the lover of out-door life. The proximity of San Francisco and Oakland, where riding is much in vogue, assures a ready market for an attractive animal at all times. Polo is becoming very popular in California, and horses suitable for that game are in great demand.

The annual Santa Clara Valley Fair and horse show gives an impetus to the breeding of good horses, which is now at low ebb; unmistakable indications point to a return of the horse for pleasure, recreation and entertainment, and the time is not distant when California in general and Santa Clara County in particular will resume its position as the birthplace of champions.

LUMBERING—

The lumbering timber in this county has been practically exhausted. The great redwood trees that originally forested large portions of the valley side of the Santa Cruz mountains were cut over years ago, and much of the new growth also has been cut for firewood, grape stakes, railroad ties and fence posts. Here and there in the canyons and on the flanks of the mountains are a few of the original trees, and groups of fair size, second growth, stately and majestic, but small in girth and low in height compared with the former monarchs that have been fed to the mills. Many small mountain ranchers during the winter months find employment in cutting oak, pine and redwood firewood, which finds ready sale in the valley cities and towns at profitable prices.

MANUFACTURING—

Manufacturing industries have been developing in Santa Clara County for many years, and in recent years quite rapidly. Proximity to the Bay, excellent railroad facilities, a climate that permits mechanics to put in every working day in the year, and attractive living conditions are the main factors contributing to the present and the growing importance of the manufacturing element in our valley industries. The following list of manufacturing concerns, large and small, while possibly not complete, covers the most important of them, as compiled January, 1923:

ALCOHOL—

Western Industries Co., Agnew

ARTIFICIAL ARMS—

D. W. Dorrance, San Jose

AGRICULTURAL IMPLEMENT TEETH—

John Christian, San Jose

AUTOMOBILE BODIES—

Eagle Mfg. Co., San Jose

W. P. Smith, San Jose

Hoepfner & Son, San Jose

National Auto Body Mfg. Co., San Jose

Harry Sibley, San Jose

Standardized Body Co., San Jose

AUTOMOBILE RADIATORS—

W. A. Grady, San Jose
Thomas & Jensen, San Jose
San Jose Radiator Works, San Jose

AUTOMOBILE TIRES—

Aero Cushion Tire Mfg. Co., San Jose

AUTOMATIC BEARINGS—

Automatic Bearing Machine Co., San Jose

AUTOMOBILE REAR AXLES—

National Axle Corporation, San Jose

BASKETS—

Rehndorff's Wickery Factory, San Jose

BEDS (Wall)—

Building Supply Co., San Jose

BOILERS—

Rueter Bros., San Jose
R. J. Wight, San Jose

BOILERS (Marine)

Joshua Hendy Iron Works, Sunnyvale

BOILER COMPOUND—

Marvel Compound Co., San Jose

BOXES (Fruit and Confection)—

C. H. Steere Mfg. Co., Palo Alto

BOXES (Fruit, Lug and Shipping)—

S. H. Chase Lumber Co., San Jose
Pacific Shingle and Box Co., San Jose
California Box Distributors, San Jose

BREAKFAST FOOD—

"Cerezea," L. E. Humphrey, San Jose

BRICKS—

San Jose Brick Co., San Jose
Peterson-Kartschoke Co., San Jose

BRICKS, PRESSED—

Los Angeles Pressed Brick Co., Agnew

BROOMS—

Derrick Broom Factory, San Jose
J. A. Applegate, San Jose
San Jose Broom Factory, San Jose

BURNERS (Coal Oil)—

Charles A. Sawyer, San Jose
Charles L. Torrey, San Jose

BURNERS (For Evaporators and Prune Dipping)—

Oliver Oil and Gas Burner Co., San Jose

CARRIAGES AND WAGONS—

M. Broedel, San Jose

CABINETS—

Bayzarian Hampartzon, San Jose
A. C. Brown, San Jose
Globe Mfg. Co., San Jose
Headstrom & Son, San Jose
G. W. Hibbs, San Jose
Kompacted Show Case and Kabinet Co., San Jose
Moses Raynor, San Jose
Michael Solimene, San Jose
Marcus Winkler, San Jose

CANNERIES—

(For list of canneries see article on "Canning Industry," Page 36.)

CANNERY EQUIPMENT AND FRUIT HANDLING MACHINERY—

Anderson-Barngrover Mfg. Co., San Jose
Smith Mfg. Co., San Jose

CANS (Fruit)—

American Can Co., San Jose

CARTONS—

Muirson Label and Carton Co., San Jose

CHARCOAL—

Pacific By-Products Co., San Jose

CHEMICALS—

Western Industries Co., Agnew

CHILDREN'S WEAR—

Nellie Cecil, San Jose

CHILDREN'S AND WOMEN'S OUTER WEAR—

Garden City Knittery, San Jose

CHILDREN'S AND WOMEN'S FURNISHINGS—

Garden City Mfg. Co., San Jose

CIGARS—

E. W. Frolli, San Jose

E. C. Popp, San Jose

J. J. Ryan, San Jose

J. E. Stevens, San Jose

COFFINS—

Pacific Mfg. Co., Santa Clara

CONFECTIONERY—

C. C. Bonn, San Jose

Thos. Keyes Candy Factory, San Jose

Rod's Candy Factory, San Jose

O'Brien's Candy Factory, San Jose

National Ice Cream Co., San Jose

Rudolph's Candy Factory, San Jose

G. A. J. Crawford, San Jose

Royal Ice Cream Co., San Jose

COOPERAGE, TANKS AND BARRELS—

Lorentz & Son, San Jose

COTS—

Three Leaf Cot Mfg. Co., Sunnyvale

DEHYDRATORS—

Smith Mfg. Co., San Jose

DRAINBOARDS—

H. C. Schlosser, San Jose

EIGHT-WHEEL AUTO STAGES, STREET CARS AND TRUCKS—

National Axle Corporation, San Jose

ENGINES (Gas and Electric)—

Bean Spray Pump Co., San Jose

ENGINES (Traction)—

Bean Spray Pump Co., San Jose

EXTRACTS—

J. R. Phillips, San Jose

FERTILIZERS—

Bernal Marl Fertilizer Co., Edenvale

FLOUR—

De Cola Bros. Milling Co., San Jose

FOUNDRIES AND MACHINE SHOPS—

Manuel Adrian, San Jose

A. H. Averill Machine Co., San Jose

T. E. Baker & Sons, San Jose

W. J. Benson, San Jose

Berry Machinery and Supply Co., San Jose

W. M. Brewen, San Jose

A. T. Britton, San Jose

Campbell & Budlong, San Jose

John Christian Co., San Jose

Farmers Job Shop, San Jose

T. J. Gavin, San Jose

R. Hellwig's Iron Works, San Jose

Joshua Hendy Iron Works, Sunnyvale

R. M. Lipe, San Jose

P. E. Maurer, San Jose

Nash-Englehardt-Silva Mfg. Co., San Jose

Nelson & Sheldon, San Jose

Oxy-Acetelene Welding Works, San Jose

San Jose Foundry and Pattern Works, San Jose

State Foundry and Pattern Works, San Jose

R. G. Taylor, San Jose

- White & Paslaqua, San Jose
- Wight's Machine Shop, San Jose
- Western Welding Works, San Jose
- FOUNDRIES (Brass)—
 - Axford & DeShields, San Jose.
 - Garden City Brass Foundry, San Jose
 - Nils Johnson, San Jose
 - Otto Krause, San Jose
 - Oxford Brass Works, San Jose
- GASOLINE—
 - Inter-State Refining Co., San Jose.
 - Tregonia Co., Alma.
- GLOVES—
 - Alex. Bernauer, San Jose
- HARNESS AND SADDLES—
 - G. L. Compodonico, San Jose
 - G. A. Clark, San Jose
 - J. W. Dixon, San Jose
 - C. C. Leland, San Jose
 - Benj. Ortega, San Jose
 - Jos. Quijada, San Jose
 - Fred M. Stern, San Jose
 - W. W. Theall, San Jose
- ICE—
 - San Jose Ice Co., San Jose
 - San Jose Ice and Cold Storage Co., San Jose
 - Union Ice Co., San Jose
- ICE CREAM—
 - G. A. J. Crawford, San Jose
 - Crystal Ice Cream Co., San Jose
 - National Ice Cream Co., San Jose
 - O'Brien's Candy Factory, San Jose
 - Royal Ice Cream Co., San Jose
 - Wilson's, San Jose
- INCUBATORS—
 - Jubilee Incubator Co., Sunnyvale
- INSECTICIDES AND FUNGUS SPRAYS—
 - Bean Spray Pump Co., San Jose
 - San Jose Spray Mfg. Co., San Jose
- IRRIGATION MACHINERY—
 - Bean Spray Pump Co., San Jose
- IRRIGATION RIDGERS—
 - V. E. Parrish, Cupertino
- LABELS—
 - Muirson Label and Carton Co., San Jose
- LANTERN SLIDES—
 - San Jose Commercial Photographic Co., San Jose
- LEATHER—
 - Eberhard Tanning Co., Santa Clara
- LUMBER YARDS AND PLANING MILLS—
 - Adams Lumber Co., Los Gatos
 - Adams Lumber Co., Mountain View
 - Adams Lumber Co., San Martin
 - W. H. Bone, Morgan Hill
 - Campbell Lumber Co., Campbell
 - Central Lumber Co., Gilroy
 - S. H. Chase Lumber Co., San Jose
 - Dudfield Lumber Co., Palo Alto
 - Fourth St. Mill and Lumber Co., San Jose
 - Glenwood Lumber Co., San Jose
 - Hubbard & Carmichael Bros., San Jose
 - Chas. R. LeGal Planing Mill Co., San Jose
 - Los Gatos Lumber Co., Los Gatos
 - Milpitas Lumber Co., Milpitas
 - Minton Lumber Co., Sunnyvale
 - Pacific Mfg. Co., Santa Clara
 - Phoenix Mfg. Co., San Jose

- F. D. Sanders, Saratoga
- San Jose Lumber Co., San Jose
- Santa Clara Mill and Lumber Co., San Jose
- Southern Lumber Co., San Jose
- Sunnyvale Lumber Co., Sunnyvale
- Tri-Wood Workers, San Jose
- MACARONI—**
 - California Paste Co., San Jose
 - San Jose Ravenna Paste Co., San Jose
- MACHINE SCREW PRODUCTS—**
 - National Axle Corporation, San Jose
- MARBLE AND GRANITE WORKS—**
 - R. O. Maino, San Jose
 - Oak Hill Granite and Marble Works, San Jose
 - San Jose Granite and Marble Works, San Jose
 - Schuh & Vertin Co., San Jose
 - Western Granite Works, San Jose
- MATTRESSES—**
 - Burns Mattress Co., San Jose
 - Cal. Feather Co., San Jose
 - National Bedding Sales Co., San Jose
- MILK, POWDERED SKIM—**
 - The Creamrise Corporation, Saratoga
- MINING MACHINERY—**
 - The Joshua Hendy Iron Works, Sunnyvale
- MOTION PICTURES—**
 - De Rosa Photoplay Co., San Jose
- MOTOR TRUCKS—**
 - Rogers Una-Drive Motor Truck Corporation, Sunnyvale
- OIL HEATERS—**
 - Stokes Oil Heating System, San Jose
- OIL REFINERIES—**
 - Valley Oil Refinery, San Jose
 - Trigonia Oil Co., Alma
- OUTING EQUIPMENT—**
 - Three Leaf Cot Mfg. Co., Sunnyvale
 - S. & S. Mfg. Co., Sunnyvale
 - Musso Outing Equipment Co., San Jose
 - T. D. Anderson, San Jose
 - San Jose Awning and Tent Co., San Jose
- PACKERS—**
 - (For list of Fruit Packers see article on "Drying and Packing Industry," Page 40.)
- PAINTS, ETC.—**
 - Hydro-Carbon Co., Sunnyvale
- PATTERNS—**
 - Henry Gustavsen, San Jose
 - J. M. Hedburg, San Jose
 - State Foundry and Pattern Works, San Jose
- PICKLES—**
 - F. L. Moldenhauer, San Jose
 - Cal. Packing Corporation, San Jose
 - Cal. Supply Co., Mountain View
- PIPE (Irrigation, Sewer, Cement)—**
 - Merritt Concrete Products Co., Santa Clara
 - Santa Clara Valley Concrete Co., San Jose
 - Cal. Concrete Products Co., Sunnyvale
 - San Jose Cement Pipe Co., San Jose
- RADIO APPARATUS—**
 - Federal Wireless Telegraph Co., Palo Alto.
- PLAYGROUND APPARATUS—**
 - Patterson-Williams Mfg. Co., San Jose
- PLOWS, HARROWS, DISCS, ETC.—**
 - Knapp Plow Works, San Jose
 - Rimple-Morgan Plow Co., San Jose
 - California Plow Co., San Jose

PORTIERES, LEATHER AND ARTIFICIAL ART GOODS—

L. B. Christopher, San Jose

POTATO CHIPS—

C. H. Dietz, San Jose

POTTERIES—

Garden City Pottery Co., San Jose

POTTERIES (Plates, Dishes)—

Homer Knowles Pottery Co., Santa Clara

PUMPS (Electric, Gas, Irrigation and Spraying)—

Bean Spray Pump Co., San Jose

PUMPS (Turbine)—

Campbell-Budlong Machine Works, San Jose

PUMPS, WELLS, ETC.—

Western Well Works, Inc., 522 West Santa Clara Street, San Jose.

RAVIOLI—

E. Bonone, San Jose

Romolo Rampone, San Jose

Ravioli and Noodle Factory, San Jose

RUBBER STAMPS—

Quincy Clasglessner Co., San Jose

RUGS—

Z. T. Whitten, San Jose

Engfur Rug Co., San Jose

SCREENS—

F. P. Johnson, San Jose

Hipolito Screen Door Co., San Jose

SHEET METAL WORKS—

Acme Works, San Jose

Frank Albibi, San Jose

E. E. Farrar, San Jose

Garden City Metal Works, San Jose

W. F. Serpa, San Jose

Snyder-DuBrutz Co., San Jose

Julius Wesnitzer, San Jose

T. H. Williams, San Jose

SHIRTS—

Ormsby Shirt Co., San Jose

SHOES—

Hanson Shoe Factory, San Jose

SHOW CASES—

Kompacted Showkase and Kabinet Co., San Jose

SILOS (Concrete)—

Cal. Concrete Products Co., Sunnyvale

SOAP—

R. W. Baker, San Jose

Garden City Soap Co., San Jose

SODA WORKS—

Crown Soda Works, San Jose

Golden West Soda Works, San Jose

San Jose Soda Works, San Jose

Williams Bros. Soda Works, San Jose

SPRINGS—

Herschbank & Hanks, San Jose

STEEL HARDENING COMPOUND—

Pacific By-Products Co., San Jose

SURGICAL ELASTIC APPLIANCES—

Cyrus Hoult, San Jose

SYRUP CLARIFYING MACHINES—

Pacific By-Products Co., San Jose

TAMALES AND ENCHILADAS

Barcelona Tamale Factory, San Jose

TANNERS—

Eberhard Tanning Co., Santa Clara

TENTS AND AWNINGS—

T. D. Anderson, San Jose

S. J. Awning and Tent Co., San Jose

Musso Outing Equipment Co., San Jose

TILE (Concrete)—

Merritt Concrete Products Co., Santa Clara
Santa Clara Concrete Pipe Co., San Jose

TILE (House)—

S. and S. Tile Co., San Jose
Duplex Construction Equipment Co., Campbell

TOYS, GAMES AND NOVELTIES—

Eagle Novelty Co., San Jose.

WASTE SAVING MACHINERY FOR FRUIT AND FISH CANNERIES AND OTHER INDUSTRIES—

Stanley Hiller, Inc.

VIOLINS—

Alfred Lanini, San Jose
Theodore Scharff, San Jose

INDUSTRIAL DATA

San Jose, in the Official City Limits

Total Value of Manufactured Products.....	\$25,255,000
Employees in the plants.....	3,717
Capital Invested	11,483,777
Gross annual business.....	21,891,980
Payroll	3,580,000

Labor for January, 1,486 men and 434 women, and for August 2,993 men and 3,281 women, fluctuations due to 12 canneries and number of packing houses in the city: Capital, \$2,960,000; business, \$9,700,000; payroll, \$802,000; labor, 208 to 4,384.

In City Area

73 purely industrial concerns—Capital invested.....	\$18,473,764
Annual business	46,101,908
Annual payroll	6,041,731

Employees run from 2,167 men and 533 women in January to 4,522 men and 5,569 women in August. The fluctuation due to 21 canneries and many packing houses, facts concerning which are: Capital \$8,821,000; annual business, \$31,621,000; annual payroll, \$2,776,762.

13 largest firms—Iron and Metal Products—Capital.....	\$7,781,777
Annual business	9,375,529
Annual payroll	1,685,121

Labor, 784 men and 128 women in January to 981 men and 218 women in April, and 824 men and 133 women in December.

In City and County

Industrial concerns, wholesale houses, public service corporations, canners and packers, lumber yards and mills:

Invested Capital	\$50,653,730
Gross annual business.....	91,358,262
Gross annual payroll.....	13,601,068
Gross annual payroll (canners and packers).....	4,837,102

40 Canneries: Capital, \$12,467,428; annual business, \$49,236,750.

97 largest industrial plants—Invested Capital.....	\$27,514,146
Annual business	70,692,159
Annual payroll	10,517,653

Employees run from 4,041 men and 710 women in January to 7,968 men and 9,365 women in August; the fluctuation being due to 40 canneries and numerous packing houses.

Iron and Metal products: Pumps, gas engines, canning machinery, tin cans, agricultural implements, sheet metal, foundry and machine shop products from rough castings to the finest bearings, well casing, pumping equipment. Fifteen of the largest firms in the county, most of them in San Jose or the immediate vicinity: Invested Capital, \$9,131,777; annual business, \$10,675,529; annual payroll, \$2,435,981; second to the canning and packing industry in importance.

MINERAL RESOURCES

Quicksilver—Although Santa Clara County is not a mining county, it has produced more quicksilver than any other section of the world except Spain. The New Almaden mine, from which the Indians, long before the Spaniards came to California, obtained red

pigment for painting their bodies from the cinnabar, has been worked since 1824, and from 1850 to the beginning of the present century it produced nearly one million flasks of quicksilver. It has been producing heavily ever since until a number of years past, and under 9,000 acres of the property there are vast deposits still to be opened up. The mine is located 13 miles southerly from San Jose. The New Guadalupe mine, 10 miles from San Jose and six miles from the Almaden mine, produced from 1907 to 1920 about 28,000 flasks.

Oil—The Moody Gulch section, 17 miles south of San Jose, near Alma, was among the first oil fields developed in California, and from 1878 to 1886 it produced 80,000 barrels of the finest paraffine base oil. More or less oil has been produced there ever since and operations are still being conducted on a small scale. No deep well has ever been drilled in that section and its possibilities therefore have never been tested. Several years ago a gasoline still was built in Moody Gulch and gasoline in comparatively small quantity is being made from oil pumped from the old wells. There are oil indications in a number of localities in the county.

Magnesite—Vast deposits of magnesite and manganese exist in the Red Mountain section east of Mt. Hamilton, and during the world war there was a pressing demand for the output of these mines. There is magnesite also in the vicinity of Madrone and other localities in the southern portion of the valley.

Chrome—Deposits of chrome were discovered a few years ago 15 miles southerly from San Jose, near the Uvas road.

Marble—Three kinds of marble are found in the Llagas section, but so far no attempt has been made to utilize the marble commercially.

Building Stone—The Graystone quarry, located several miles southerly from San Jose, produced the beautiful and enduring stone that went into the construction of the Stanford University buildings, at Palo Alto. The soft and pleasing tone of these buildings has improved with age. There is also excellent building stone in the vicinity of Gilroy, where also are valuable deposits of shale such as is used in the manufacture of vitrified bricks.

Crushed Rock—There is no finer road material in California than the basaltic rock found near Saratoga; it cements and binds well, and the red-colored rock has done much to beautify the roads and the grounds of suburban homes. For many years a large quarry has been crushing this rock for county road building purposes, the quarry having a capacity of 1,000 tons of washed rock and gravel per day.

Mineral Springs—There are many mineral springs in the county, near San Jose, Gilroy and other sections. Among the health-giving springs are those in Alum Rock Park, near San Jose, an official analysis of which follows:

Official Analysis of Alum Rock Waters by Alum Rock Park Commission

Analysis of Salt Water shown in grains per gallon:	
Sodium Chloride (common salt).....	583.30
Magnesium Chloride	87.49
Calcium Chloride	42.58
Total	713.37
Also Carbonic Acid Gas in solution.	

Analysis of Soda Water shown in grains per gallon:	
Sodium Chloride (common salt).....	87.49
Sodium Sulphate	2.05
Sodium Bicarbonate	215.82
Magnesium Bicarbonate	13.99
Calcium Bicarbonate	32.08
Total	351.43
Also Carbonic Acid Gas in solution.	
Analysis Black Soda Water shown in grains per gallon:	
Sodium Chloride (common salt).....	55.99
Sodium Sulphate	39.08
Sodium Bicarbonate	62.03
Magnesium Bicarbonate	27.99
Calcium Bicarbonate	30.91
Total	216.00
Also Carbonic Acid Gas in solution.	
Analysis of Sluphur Water shown in grains per gallon:	
Sodium Chloride (common salt).....	19.24
Sodium Sulphate	9.65
Sodium Bicarbonate	75.80
Magnesium Bicarbonate	17.22
Calcium Bicarbonate	40.83
Total	162.74
Also Hydrogen Sulphide and Carbonic Acid Gas in solution.	
Analysis of Magnesia Water shown in grains per gallon:	
Sodium Chloride (common salt)	14.58
Sodium Sulphate	26.83
Sodium Bicarbonate	64.16
Magnesium Bicarbonate	19.83
Calcium Bicarbonate	38.49
Total	163.89
Also Carbonic Acid Gas in solution.	

THE NURSERY INDUSTRY—Authority: Elmer Bros., San Jose

San Jose, in the late '50s, was the pioneer in the fruit tree nursery industry, shortly before the introduction of the French prune in 1856; today there are 15 nurseries in the county, growing every variety of deciduous fruit trees known, and finding eager markets in the vast territory stretching from British Columbia to Old Mexico as well as a large local market. In addition to the extensive acreage in fruit tree nurseries, fully 150 acres are devoted to growing some millions of budded roses of approximately 900 varieties, which are marketed throughout the United States. All new varieties originating in Europe are brought over and tested in the local nurseries before they are put on the market in this country. The California Nurserymen's Bud Selection Association, of which local nurserymen are members, is doing much to improve all kinds of fruit tree stock in this State. Local soil and climatic conditions are highly favorable to the growth of sturdy, vigorous trees in this valley. A rich garden soil, preferably mellow loam, moist but thoroughly drained, with good depth, is ideal for nurseries, and such land, well situated, is worth from \$500 and up an acre. The price of nursery stock varies from year to year, according to supply and demand, but through organization the industry has been placed on a sound business basis and is guided by a high standard of usefulness.

POULTRY—Authority: W. H. Ward, Morgan Hill

The production of poultry and poultry products has been a rapidly developing industry in Santa Clara County for several years past. From the northern to the southern end of the valley are both large and small poultry farms, excellently equipped and scientifically managed.

Climate—The climate is highly favorable, being moderately warm in summer, mild in winter, and lacking the extremes that are trying.

Markets—The close proximity to San Francisco and Oakland and the numerous trains to these cities make the marketing of these products an easy matter. Motor trucks also have simplified the transportation problem for both out-going and in-coming supplies. The trucks of the Egg Producers of Central California (a co-operative association of poultrymen), and trucks of independent buyers gather a large proportion of the products right at the producers' door. The Pacific Coast is fast becoming the poultry yard of the United States; climate and other advantages are responsible for pushing poultry products here as nowhere else. Co-operative marketing in all products has reached a high stage. Eggs are sent East by the hundreds of carloads each year, and the uniting of the entire Pacific Coast in the marketing of its eggs will probably increase the production of eggs to a much greater volume.

Chicks and Eggs—The marvelous growth of the day-old chick business indicates wonderful expansion in egg production. Commercial egg production is probably the most profitable branch of the commercial stock business for those adapted to this kind of work, when capital invested is considered. Great advancement in a comparatively few years has been made. Among the factors contributory to this are the open front house, commercial meshes, colony hovers, electric lights and trap nests.

Housing—In housing there is no cut and dried "best"; the man "behind the gun" who can adapt himself to existing conditions will surely succeed. Dry, sunny, draft-proof, one side open with three sides tight, are general requirements for houses. Some have housing for units of 25, 100, and some 1,000, one bunch. The great majority are between these two extremes. Poultry respond to comfort and correct feeding, not to expensive housing. It pays to install labor-saving equipment, for labor is a large expense item. Electric lights properly used during the short days of the year have produced fine results in getting eggs, when prices are high. More hours per day for turning feed into eggs is the story in a nut shell. The trap nest, regularly used, is the real way of detecting the high producers, for breeding purposes. The colony hover has proven a boon to the raisers of chickens, as probably more have failed at brooding than in anything else.

Feeding—A good commercial mash insures against abrupt changes in feeding, which poultry resent. Many poultrymen buy the raw material and make their own mash, but the recipe for such mixtures must be scientific as to kinds of food used and proportion of each. An abundance of green feed daily the year around is a prime essential. Too much emphasis cannot be put upon green stuff and plenty of pure water, for right here may hinge success or failure. Grow an abundance of greens, and buy all other feed, is a very safe

practice, where land is worth from \$400 to \$1,000 an acre. Be sure of a water supply. Alfalfa, clover, kale and beets are the greens most used. A good grade of alfalfa hay run through the cutter and soaked in water makes a fair substitute for the actual greens, but the best substitute is not as good as a variety of the real thing.

Land—Much poultry is kept as a side issue with orchards, etc., but when poultry is the main business not much land is required. There are many "one-man" plants on a single acre; this is intensive, while 5 to 10 acres make a large plant. The land should be well-drained and have an ample water supply.

Baby Chicks—Baby chicks can be bought from 10 to 20 cents each, depending on season, breed and breeding; the usual price is from 12 to 17 cents. Numerous large commercial hatcheries located in the county send chicks as far as three-days journey by both express and parcel post. Many raisers find it cheaper to buy chicks than to hatch them, while others prefer to hatch their own eggs. Hatching takes place at all times of the year, but the most desirable months are from January to April, inclusive. Pullets hatched before March 1 to 10 are apt to go through pullet moult when eggs are the highest. Those hatched after about March 10 usually do not moult, but their eggs are somewhat smaller than their earlier hatched sisters, which subjects them to a greater discrimination in price on the wholesale market. The earlier hatches come to maturity somewhat more rapidly than the later ones.

Profits—The early hatched Leghorn cockerels sold as broilers will yield a moderate profit, while the late hatched ones may not pay expenses. Leghorn pullets should be in full lay at six months; some will begin at four to five months. Well bred commercial egg stock are worth around \$1.50 each at this time, but the demand far exceeds the supply. The pullets are looked to for the profits for the last six months of the year. If they are from good stock hatched and reared right, as to time, etc., they will give a good account of themselves, while the hens are taking their fall moult and rest. On a well-managed, fully-equipped egg ranch the last six months of the year should show more net profit than the first six months. This is the reverse of what usually occurred a few years ago. The poultrymen should continually be eliminating the undesirables as they show up. Generally speaking, hens should be kept through two laying seasons, but some should be sold after one season. Some of the best for breeders can be profitably kept three or four seasons or even more. Probably the ideal ratio for the egg farm is to have two pullets to one hen during the fall. The profit is hard to estimate. Generally, it should be from \$1.25 to \$2.00 on each fowl kept through the year. Some will make \$3.00 per bird, while some make nothing. It is not only the number of eggs a bird lays that counts, but the time of year she lays them. A moderate lay in November will bring more profit than a heavy lay in April. Approximately speaking, it will cost about 15 to 16 cents per month to feed a laying hen. Systematic and judicious culling, together with the right use of electric lights during the fall and winter months have produced great results.

Breeds—Various breeds of course are raised by the fanciers, and the breeds are numerous, but practically all the commercial egg farms are stocked with White Leghorns.

Diseases and Pests—Poultry is subject to many diseases and pests, but by all odds prevention is the very best cure; one ounce of prevention is worth many pounds of cure. Watchfulness and regular attention to many details, together with the ability to adapt the needs to the circumstances at hand, are the secrets of success with poultry. To the right person, in a favorable locality, the future is bright.

SEED INDUSTRY—Authority: E. O. Pieper, Manager Braslan Seed Growers' Co., Inc., San Jose

Vegetable and Flower Seed growing as an industry in Santa Clara County and vicinity dates back to 1875 when, as far as known, a Mr. Wilson first produced commercially a field of Onion Seed near Santa Clara. Following his efforts several growers, recognizing the possibilities of the soil and climatic conditions prevailing here, engaged in the industry, which has gradually expanded so that today Santa Clara Valley and neighboring counties are producing fully seventy-five per cent of the Onion Seed grown in this country, and from ninety to fifty per cent of the Lettuce, Carrot, Radish, Parsnip, Beet, Salsify, Parsley and Celery sold to the wholesale trade throughout the United States, as well as supplying a very substantial demand from foreign countries.

Very large acreages are also devoted to the culture of Sweet Pea Seed, new varieties being introduced from year to year, now affording the dealer an almost unlimited variety of stocks to select from.

It has been found that Santa Clara County and vicinity possesses a climate intimately suited to the production of seed, being intermediate in character between the more severe climate of the coast counties and the hot valleys of the interior part of the State.

Our seeds are noted for their strong vitality, due to the long growing season. They also present a bright and plump appearance, quite contrary to seeds produced in localities having rains during the harvesting and curing season, which is all done in the open, very much as our fruits are dried and cured.

In recent years the annual production of Onion Seed has totalled about 1,500,000 pounds, whereas our Lettuce, Carrot, Radish and Sweet Pea yield averages well over 1,000,000 pounds of each sort, spreading over 10,000 acres of our best lands and giving employment to thousands of field laborers and skilled men in the selection, breeding and maintenance of hundreds of varieties of various kinds of seed adaptable to local production. The average annual acreage of seed farms in Santa Clara County is 2,000 acres or more.

DISTRICTS, CITIES, TOWNS

AGNEW—

Agnew, near the lower end of the valley, about six miles north-westerly from San Jose, is the center of a highly productive district, the principal crops being pears, apples, berries and garden truck. The soil is a rich, black adobe; water is available at short depth, and there are a number of old artesian wells in the district.

The town is located on the Oakland branch of the Southern Pacific railroad, and it has several stores and other lines of business, and here is the most commodious and best equipped State Hospital for Insane in the West. The Western Industries Company, near by,

is the largest plant of the kind on the Coast, distilling vast quantities of pure and denatured alcohol, while the Western Carbonic Products Company, operating in connection with the distillery, supplies a large proportion of the gas used on the Coast.

ALMA—

Alma, 15 miles southerly from San Jose, on the Santa Cruz branch of the Southern Pacific, is in a beautiful section of the Santa Cruz mountains, and is quite a shipping point for the district, in which apples, pears, cherries and grapes are the chief crops, with a considerable proportion of prunes. There are several summer resorts in the vicinity of the town. Moody Gulch, near Alma, was one of the first oil producing sections in California, the oil being of the finest grade and operations are still going on there, including a small gasoline still.

ALMADEN—

Fourteen miles southerly from San Jose is the Almaden quicksilver mine, with more than 80 miles of tunnels, which has been worked since 1824, and which has produced more quicksilver than the Almaden mine of Spain since the beginning of the latter's history far back before the Christian era. The old hacienda still preserves its ancient quaintness. The Almaden district before entering the mountains is characterized by fruitful farms and fine orchards of prunes, apricots and other fruits.

ALTA MESA—

A cluster of foothill homes and orchards in a picturesque and productive section several miles northerly from Monte Vista; soil and productions similar to those of Monte Vista.

ALVISO—

Alviso, about nine miles from San Jose, at the head of San Francisco Bay, is a small shipping port, having both water and rail transportation, the Oakland branch of the Southern Pacific via Alvarado and Newark passing through the town. Bay schooners and small steamers can operate here, and large quantities of dairy, orchard and vegetable products are shipped both by rail and water to San Francisco, Oakland and other Bay points. The Bayside Cannery, located here, cans tomatoes, pears, apricots, peaches, apples, and other fruits and vegetables, employing at the height of the season as many as 500 men and women, and a local fruit evaporator handles many apples in the fall months. The rail carriers give special attention to the handling of the cannery products. The South Bay Yacht Club has headquarters here, with a large fleet, and the Bay sloughs and marshes afford, during the game season, first-class wild duck hunting.

The district is level, sloping gently to the bay, and the soil is adobe, in places covered with silt from several inches to several feet in depth; the northern section is marshy, and the very low lands, where drainage is poor, carries some alkali, which however can usually be remedied by proper cultivation and drainage. Pears, apples and berries thrive in this section, and dairies flourish. Artesian water is had at depths of from 300 to several hundred feet, and in connection with irrigation a system of drainage is usually used to drain off excess water. As indicated above, shipping and marketing facilities for the products of the district are unexcelled.

BERRYESSA—

The pretty town of Berryessa is the center of one of the oldest orchard sections in the valley, about four miles northeast of San Jose, near the foothills. The old orchards are still thrifty and heavy bearers, and hundreds of younger orchards fill up the district. Cherries, apricots, prunes, peaches and walnuts thrive here in a genial climate and in a soil that ranges from a silt loam, easy to work, to adobe, the latter rich and lasting, but difficult to cultivate if not in the right condition. There are some poorer soils to the southeast, but the district as a whole is one of the richest for fruit production in the entire valley. The elevation is about 200 feet above sea level, and because of its proximity to the foothills the climate is warmer than on the floor of the valley, and for this reason apricots do especially well in that district. The Flickinger cannery, the first established in the county, is in the district. The electric line from San Jose to Alum Rock Passes through, and paved roads afford fast travel for automobiles and auto trucks. Here, as in most of the districts throughout the valley, telephones, rural mail delivery, electric power and tradesmen's delivery wagons make the farm and orchard life one of comforts and enjoyment.

CAMPBELL—

Campbell, nearly six miles southerly from San Jose, on the Santa Cruz branch of the Southern Pacific and also the Peninsular electric line, is literally surrounded by orchards. Paved highways lead into it from all sides, and with its three fruit canneries, four dried fruit packing plants, largest drying grounds on the Pacific Coast, two planing mills and lumber yards, large chicken hatcheries, building blocks, crushed rock and gravel works, two banks, hotel, churches, modern high school and grammar school, and weekly newspaper, is a busy and growing town. The district had the first rural free delivery of mails in the United States.

Prevailing soil in this district is a gravelly loam, being of a lighter nature to the east and the north and more varied to the west and the south. Where there is much gravel covering the soil below or intermixed with it irrigation is difficult, because of the porous soil, and crops on such land produce only about one-half the yield of the lands that contain but little gravel.

Many of the orchards are irrigated by ditch system during the winter or spring months from the Los Gatos creek, but the most of them from wells. The underground supply of water is struck under normal conditions of rainfall from 100 to 200 feet below the surface, but the ever-increasing number of new orchards and wells in the valley combined with less than normal rainfall for a number of years have lowered the water level until it is necessary here and elsewhere throughout the valley to bore deeper for an ample water supply. Cost of irrigation varies very considerably in different sections of the county, owing to ease or difficulty of obtaining water from streams or wells; an average of these costs will be found elsewhere in this booklet in the articles on Prunes, Cherries, Apricots, etc.

Prunes and apricots are the chief crops in the Campbell district, but there are also peach, pear and cherry orchards and vineyards, much of the soil being finely adapted to grapes.

COYOTE—

On the paved State highway and the line of the Southern Pacific, 12 miles southeasterly from San Jose, is Coyote, near the stream of that name, quite a shipping point for prunes and other fruits and the products of the general farms in the district. Although rather narrow at this point, the Coyote section is highly fertile, and its orchards and seed farms are notable for production. The soil is a wash from the wide stream and is rich and deep, although not extensive in area.

CUPERTINO—

On the Peninsular electric line and the paved Saratoga and Mountain View road, ten miles west of San Jose, is the town of Cupertino, with a stretch of orchards on every hand and the beautiful Santa Cruz foothills and mountains for an ever-attractive background. It is reached by paved roads from San Jose through an endless procession of orchards. The soil is fertile and the majority of the orchards are prunes and apricots. To the west the soil begins to run into lighter, red soil, in the foothills, excellent for grapes. This is an attractive residential section, as is the entire foothill country from Palo Alto to Los Gatos. Cupertino has a large fruit cannery, an association of growers that sun-dries, dehydrates and packs fruit, six fruit packing houses, several dehydrators, and a walnut packing house, evidencing the vast quantity of fruit grown in that district.

EASTERN FOOTHILLS—

The slope of the eastern mountain range adjacent to the valley extends the length of the county and is known as the eastern foothills, and the strip from Milpitas to Evergreen is notable for its early vegetable productions, as well as for prunes and apricots. It is a comparatively frostless belt, and consequently tender plants and soil crops can be put on the market a number of weeks before similar products from the main valley. Early peas, potatoes and sweet corn are the leaders, and there is an eager demand for them by San Jose, Oakland, San Francisco and other markets.

The soil is a black clay loam, containing considerable lime, underlaid at a depth of three feet by a yellow clay containing cracked rock, and although not the depth of the valley soils, on the benches where the wash from the hills above has collected it is deep and highly fertile, as the flourishing condition of the numerous prune and peach orchards testify. Water is available at a slight depth, but usually not sufficient for irrigation purposes. The soil has excellent water-holding capacity, and the hill orchardist conserves his moisture by frequent cultivation; the rainfall also on the hills is a third more than in the valley. Foothill crops are not so heavy as those in the valley proper, but the fruit is sweeter than that of the thoroughly irrigated valley orchards. These eastern foothills afford many ideal building sites, and the roads leading to them are good.

EDENVALE—

A small but delightful district is Edenvale, six miles southerly from San Jose, on the Southern Pacific coast line and the State highway. A railroad station, school, stores, fruit packing house and many fine homes characterize this district. The Coyote creek flows through the neighborhood, and the soil is very productive. The climate is

agreeable, and the orchards, chiefly prunes, are unexcelled by any in the valley for vigor of growth, large crops and excellence of quality.

EVERGREEN—

Evergreen, seven miles southeast of San Jose, a little village of a few stores, shops, a church and a school, snuggles up near the warm foothills, in the thermal belt, and it is reached by a good paved road. It is separated from San Jose by a wide strip of adobe or clay lands, which are cultivated to grain and hay, with some dairies and alfalfa fields, and of late years many young prune and apricot orchards, near the foothills. The general farms are held in tracts of from 80 to 200 acres each. Around and beyond Evergreen the soil is a sandy loam, and here early peas, sweet corn and potatoes, barley, and apricots, prunes, peaches and grapes are grown, frost being a rare visitant. Oranges, lemons and pomelos thrive in the foothill nooks, but they are grown more for ornament and home use than for commercial value.

GILROY—

It is doubtful if any section in California of similar area is so well favored with equability of climate, richness of soil, abundance of water supply, variety of production and beauty of natural surroundings as the extensive Gilroy district, comprising the entire southern end of the valley. The city itself is located 30 miles from San Jose, on the Southern Pacific, with a branch line to Hollister, and its paved main street is part of the State highway from San Francisco.

The city has grown rapidly during the past few years, and with the contiguous sections has a population of approximately 7,000. It is a city of homes, with broad streets, lined with shade trees, flower gardens and comfortable residences; the water and gas and electric lighting systems are municipally owned; it has an excellent sewer system, a thoroughly equipped fire department, a commodious municipal building, and a fine public library; two banks, two newspapers, a chamber of commerce, modern high school and grammar school, several churches, I. O. O. F. Orphan Home, new three-story hotel, restaurants, Masonic buildings, theater; fruit, berry and vegetable cannery, four fruit packing houses, two dehydrators, two feed mills and warehouses, apple dryer, cheese factories, seed cleaning plant, two planing mills and lumber yards, nursery, soda works, candy factories, gas and electric plant, two machine shops, garages, etc.; second-class postoffice, with free city and rural delivery, telephone system, clubs, lodges, a Country Club with fine golf course, tennis courts, and a city park.

Climate, Soil, Production—The southern end of the valley has more rainfall than the northern section and in summer is somewhat warmer, but the average temperature in July is only 65 degrees and in January 50 degrees. The annual rainfall is about 20 inches, as compared with 16 inches at San Jose. The soil ranges from a light gravelly loam to a heavy deep black sediment. Artesian water exists over a large section south and east of Gilroy, a large portion of which is given over to dairying, and nearly every dairy has a large acreage of alfalfa and its own cheese factory, this being one of the oldest cheese-producing sections in California. Some dairymen sell their milk and cream to the local creamery, at Gilroy, and some deliver to a

large co-operative cheese factory near that city. There are several extensive flower and vegetable seed farms in the district; excellent tobacco is grown; the poultry industry thrives; stock raising is extensive; many general farms produce hay, wheat and barley; the growing of strawberries, blackberries, loganberries and raspberries is profitable; grapes are produced in abundance, and the orchards of prunes, pears, cherries, peaches, apricots and apples are growing in number each year.

Foothill Sections—In the foothill sections, practically free from frost, apricots and other early fruits are grown, also lemons, which do well in the warm foothill belt. Above the foothills, on the west side, redwoods and other natural trees forest the mountain sides and summits, and here are summer resorts, summer homes and camping places. The Gilroy Hot Springs is a resort on the east side.

GUADALUPE—

Orchards and vineyards lead up to the entrance of the picturesque canyon in which is the Guadalupe quicksilver mine, 10 miles southerly from San Jose. This mine has produced since 1907 about 30,000 flasks of quicksilver.

LINDA VISTA—

Linda Vista is an attractive district in the eastern foothill section, in the thermal belt, five miles from San Jose, site of the Country Club, with its 19-hole golf course, overlooking the valley. Some fine prune and apricot orchards are in this district, which is highly desirable for residential purposes. Its progressive residents maintain an active Improvement Club.

LOS ALTOS—

Los Altos, a home center in the wooded foothills west of Mountain View, 12 miles from San Jose, and 35 from San Francisco, is in the thermal belt, at an elevation of 225 feet, with a mild climate and beautiful outlook. The town, which consists of several stores and the usual town varieties of business, is the center of a community of country homes and a number of orchards, and it is served as to transportation by the Southern Pacific and the Peninsular electric lines. It is only 10 minutes to Palo Alto, six miles distant by the electric road. The foothills are of a rolling nature and are adapted to the successful growing of prunes, apricots, grapes and lemons; the soil is a red clay with some gravel. It is one of the most attractive suburban home localities in the county and is within easy reach of San Francisco by train. Los Altos has a wide-awake Improvement Club.

LOS GATOS—

Los Gatos, "The Gem City of the Foothills," is nearly 12 miles south of San Jose, on the Santa Cruz branch of the Southern Pacific and the San Jose-Santa Cruz paved highway, at the foot of Los Gatos canyon as it opens into the valley. Five hundred feet above the floor of the valley, it nestles in a sheltered nook of the Santa Cruz mountains, and spreads upward and outward over commanding benches and ridges to an elevation of 800 feet, affording matchless views of the valley's wide sweep and near-by rugged summits. The

mountains are covered with oaks, madronas, bay trees and other evergreens, and many picturesque homes look out from the varied foliage.

Los Gatos with the contiguous territory has a population of approximately 5,000. It is connected by the Peninsular electric line with San Jose, Campbell, Saratoga, Los Altos, Mayfield and Palo Alto, and by auto-stage lines with San Jose and Santa Cruz. It has broad paved streets, modern business buildings, theater, high school and grammar school, and a Carnegie library; the Catholic Novitiate overlooks the city. Two banks, a weekly newspaper, a large and attractive hotel, several canning and packing house establishments and mercantile enterprises of many kinds contribute to the business life of the city. It is also a popular resort, both summer and winter. It has several churches, a fine public park, one of the best equipped automobile camps in California, and a live Chamber of Commerce.

Climate, Soil, Productions—A natural phenomenon that influences production is the rising of the warm air of the valley at night, which clings to the mountain sides, while the cool air descends through the gulches to the floor of the valley, and at night the temperature on these hills is 10 degrees higher than in the valley below. As a consequence, oranges, lemons and pomelos do well here, and flowers luxuriate in the home gardens. The annual rainfall is practically double that of San Jose and fully 10 inches more than the average throughout the floor of the valley. The soil is reddish clay with gravel and rather light for orchard purposes, except along the Los Gatos creek, which flows through the city, where the soil is alluvial and rich. Vineyards thrive in the Los Gatos district, and prunes and apricots are important crops, and their light bearing as compared with the deeper soils of the valley is compensated for largely by the plumpness of the fruit and its larger sugar content. Poultry is quite an extensive local industry, both for eggs and table use and for prize fowls.

MAYFIELD—

Mayfield, 17 miles from San Jose, northwesterly, on the Southern Pacific, the electric line and the State highway, is one of the oldest settlements in the county, and Stanford University is near by. With its ample transportation facilities, modern business blocks and comfortable homes and easy access to San Francisco, it offers many advantages for residential and business purposes. It has a bank, stores, churches and school, a cannery, and the principal industries of the district are farming, fruit growing, dairying and poultry raising. The soil is excellent, lighter in the foothills, ranging to the deeper moist soil in the stretches nearer the Bay. This section has a population of about 2,500 and it sustains a Chamber of Commerce and a weekly newspaper.

MERIDIAN—

Meridian Corners, near Santa Clara and five miles west of San Jose, on the electric line and a paved highway, with a few stores, shops and electric line station, is the heart of a rich fruit district, chiefly prunes. Good roads, schools, churches, rural mail delivery, telephone service and electric power are available to the farmers and fruit growers, and transportation by electric road and auto trucks.

MILPITAS—

Milpitas district borders the Alameda county line on the north and stretches from the Bay to and including the eastern foothills and for some miles toward San Jose, from which city the town itself is distant seven miles. It is on the branch State highway, paved, from San Jose to Oakland, and has excellent transportation facilities by the Southern Pacific and the Western Pacific railroads. It has stores, a bank, a cannery, and the lines of business ordinarily found in fairly well-developed towns and it is the center of a section rich in native soils and variety of productions. In addition to the railroads, the farmers and growers have the advantage of water transportation for Bay points from Alviso, only three miles away, reached by auto truck. A good school and two churches are a feature of the town.

Climate, Soil, Productions—The climate in the level section of the district is about the same as in other parts of the main valley, but on the slope of the hills there is a thermal belt, making possible the production of very early vegetables and opening up possibilities of citrus development in the future. Near the Bay the land is swampy and marshy, and this will be rich soil when reclaimed; from the marshes to the foothills the land is level, and the foothills rise gently and permit of cultivation almost to their tops.

The soil is of the black and gray adobe series, the two predominating types being the San Joaquin black adobe and the Salinas gray adobe, of depth of six feet or more, both being very productive if properly drained and cultivated. Along the streams and where the land has been overflowed there is a layer of sediment from a few inches to several feet in depth, which adds to the soil's richness and makes it more easily cultivable. In places there are some alkali salts, but not in sufficient quantity to affect the soil unless the latter is poorly drained.

There is ample artesian water in most of the district, but with the exception of alfalfa, fruits and berries most of the crops are grown without irrigation, the chief crops being early vegetables, such as potatoes, peas and corn, much of it grown on the hillsides. Hay and grain are produced in large quantities, and canning peas and tomatoes are extensive products. The early vegetables are in great demand by the Oakland, San Francisco and other markets, and the canning vegetables find a market right in the large cannery at Milpitas. There are many dairies in the district and many fields of alfalfa in connection with them; whole milk is shipped in vast quantities daily to Oakland, San Francisco and San Jose. The orchards in this section, prunes, pears, apricots and other fruits, evidence favorable conditions of soil and climate, except of course in the low lands, which are pastured during the summer time and partially overflowed in the winter, and the higher, rougher hills, over the first range, are also suitable only for grazing purposes. Much of the vegetable land is operated by renters, who pay from \$20 to \$25 per acre rental per year.

Calaveras Valley, seven miles from Milpitas, over the eastern range, with an area of 1,500 acres, once settled by hay and grain farmers, has been for several years, together with the surrounding watershed, the property of the Spring Valley Water Company, having been purchased for a huge reservoir site.

MONTE VISTA—

Monte Vista, 10 miles westerly from San Jose, is a beautiful foothill section, with lovely homes and numerous orchards of prunes, apricots and other fruits. The foothill soil and the level sections are similar to those elsewhere described along the western foothills. A new fruit cannery and dehydrator operate in this district.

MORGAN HILL—

Morgan Hill, nearly 20 miles southerly from San Jose, on the Southern Pacific and the State highway, is the highest point on the floor of the valley, having an elevation of 500 feet above sea level; the valley north is drained by the Coyote creek, flowing northerly, emptying into San Francisco Bay at the foot of the valley, while south of Morgan Hill the mountain streams that enter the valley flow southerly, into the Pajaro river. The town and surrounding district has a population of about 3,000. Here are located several stores, bank, cannery, packing house, several churches, high and grammar schools, a weekly newspaper, and a Board of Trade.

Climate, Soil, Production—The climate is that of the general valley; the district is dominated by El Toro (The Bull), a curiously shaped hill near by. The soil is somewhat variable, much of it being highly fertile, some of it east of the town being a loose, dark-colored loam, while to the north and to the south the soil is largely a red clayish loam, of lesser fertility. Prunes and grapes are the leaders in fruit production, but there are many orchards also of peach, apricot and other fruits. The natural surroundings are attractive, and the district is steadily growing in importance as a fruit producing center.

MADRONE—

Madrone is a fruit and cattle shipping point, on the Southern Pacific and the State highway, 18 miles from San Jose and two miles north of Morgan Hill, at an elevation of 350 feet. Climatic, soil and productive conditions are about the same here as at Morgan Hill.

MOUNTAIN VIEW—

Mountain View, 12 miles from San Jose, in the northerly end of the valley, and 35 miles from San Francisco, is a charmingly located little city of 2,000 inhabitants and of about 5,000 in the entire district. The city has two banks, modern stores and numerous other lines of business, a weekly newspaper, a \$50,000 pre-cooling plant, pickle works, three canneries, two packing houses, saw and planing mills and ready-cut houses, berry basket and box factory, modern high school and grammar school, a number of churches, and the Pacific Press Publishing plant, with an annual turnover of a million dollars. It is on the Southern Pacific and the State highway, and the new South Shore Port, offering transportation to bay and river points, now being completed (1923), is only three miles distant. There are many inviting homes in the city and surrounding country. A Chamber of Commerce is actively pushing community progress.

Climate, Soil, Productions—The district ranges from the Santa Cruz mountains to the Bay, embracing a large section unsurpassed in all California for variety and extent of soil production. The lowland section is cooler than the larger portion of the district west of the city,

and it produces hay, some grain, and vegetables. West to the foothills the climate is about perfect, there being little frost, so that tender early fruits like the apricot thrive wonderfully. The foothill section is ideal.

Two distinct types of soil characterize the district: East of the city, extending toward the Bay, the soil is a black adobe, in many places poorly drained; west to the Santa Cruz range, several miles distant, the soil is a reddish sandy loam, usually underlaid with adobe. Along the banks of the streams the soil is a deep loam, in places from 10 to 12 feet in depth.

The variety of soil products grown is almost innumerable; prunes, apricots, peaches, cherries, some pears and apples, strawberries, raspberries, blackberries and loganberries, and every kind of vegetable, contribute to make this district practically incomparable in the richness of its orchard, field and garden products. Floriculture is also an important local industry, and millions of blossoms are shipped annually to the San Francisco market. Tomatoes, berries and vegetables and some orchards are irrigated, the water being pumped from wells.

PALO ALTO—

Palo Alto, the seat of Stanford University, at the northern end of the county, between the western hills and the Bay shore, 17 miles northwest of San Jose and 30 miles from San Francisco, has a present population (1923) of approximately 8,000. It is an attractive, modern city, on the Southern Pacific and the State highway, and because of its educational advantages, equable climate, picturesque environment and proximity to San Francisco it is rapidly growing. Water system, power plant and incinerator are owned by the city, which is well paved and lighted. In addition to modern mercantile and other business establishments it has three banks, two theaters, six public school buildings, a dozen churches, four private boarding schools (two each for boys and girls), a daily newspaper, an electric street car line, and a Carnegie library. Near the city are two Catholic seminaries, one for girls, the other a preparatory college for the Catholic priesthood. It is the northern terminus of the Peninsular electric system, whereby it is connected with San Jose, Saratoga, Los Gatos, Campbell and other towns on the west side. Stanford University, with an original endowment of \$21,000,000, is located near the western edge of the town, in a tract of 8,000 acres. The many costly homes, the numerous home flower gardens and the oaks that have been left to beautify the streets and the city, combine to make a pleasing picture that deeply impresses the visitor. It has a well-sustained Chamber of Commerce.

Among Palo Alto's industries are a large factory for the manufacture of wireless machinery, and manufactories of furniture, fancy wooden boxes and cabinets, and a candy factory.

The average summer temperature of this section is 70 degrees and that of winter 55 degrees. Agriculturally, the district is not large. The soil is an adobe, with covering of sediment, and near the foothills a sandy loam. The conditions are eminently suited for small truck and berry farms, small dairies, and poultry ranches. A short distance east of the city, toward the Bay, there is a large colony of poultry farmers, each owning a small acreage, who have developed an extensive industry, having a ready market for all their products at

Palo Alto and in all the cities and towns down the peninsula to San Francisco. There is an ample water supply by boring a few hundred feet for all irrigation purposes.

SAN JOSE—

San Jose (San Ho-Say), the county seat of Santa Clara County, is located within six miles of the southern end of San Francisco Bay and 47 miles from San Francisco; the city during the past several years has grown over its official municipal lines on all sides, and its population at this time (1923), as estimated by the 1923 Business Directory of the city, issued in January, is approximately 67,000. The city was founded by the Mission Padres, November 29, 1777, only about 10 months after the founding of Mission Santa Clara, three miles westerly. The State highway from San Francisco to Los Angeles passes through the city, and it has admirable transportation facilities by means of the Southern Pacific and beginning with the past year the Western Pacific; auto stage and truck lines radiate in all directions. The San Jose Railroads and the Peninsular Railway supply electric service for the city, and the latter connects it with most of the cities and towns on the west side of the valley from Los Gatos to Palo Alto; the system operating in the city has one line extending toward the eastern foothills, on Alum Rock Avenue, and another to Alum Rock Park, seven miles distant, in the same foothills. Train service to San Francisco is almost hourly, and the trip by automobile over the paved highway is made in two hours, or less. Paved roads, power lines, telephone and telegraph lines, extend from San Jose throughout all the contiguous country, and paved roads lead to the coast resorts and to the interior of the State and down the coast.

San Jose has a City Manager form of government; city assessment (within the official lines only), on a basis of from 50 to 60 per cent of actual valuation, is \$4.30, embracing city tax rate of \$1.45, school district tax \$1.13, and county tax (inside incorporated cities), \$1.72; the city has a bonded indebtedness of \$590,625, and the school district, covering the territory within the municipal lines, has bonds to the extent of \$1,043,000; the legal bonding capacity of the city is \$4,500,000, and its present potential bonding capacity is \$3,909,375. Its public buildings consist of Postoffice (Federal), Court House, Hall of Records, Hall of Justice (County), and the City Hall and Public Library (Municipal); it has several parks, including one of 600 acres, with mineral springs, natatorium, mud baths, etc., (Alum Rock Park); of its more than 100 miles of streets, 43 miles are paved.

San Jose ranks high as an educational center, having a State Teachers and Junior College (formerly State Normal School); High School, with equipped polytechnic buildings, the school—day, night and polytechnic—having an enrollment of 7,880 students; nine grammar schools, kindergartens, Business College, College of Notre Dame, College of the Pacific, and Conservatories of Music. The University of Santa Clara is three miles distant, at Santa Clara, and Stanford University, at Palo Alto, is 17 miles away; Lick Observatory is at the summit of Mount Hamilton, near by. It is a home city, with attractive residences and gardens, three first-class and other good hotels for the accommodation of tourists and visitors; many excellent restaurants and cafeterias; more than 60 church organizations, the leading ones

having attractive church edifices; six theaters; Y. M. C. A. and Y. W. C. A. buildings; recreation parks for school children and students; Carnegie Library; Law Library; practically all existing fraternal organizations in the United States are strongly represented here, some of them owning fine headquarters buildings; its civic and business organizations include a Chamber of Commerce, with nearly 1,500 members, a Commercial Club, with handsome headquarters; Rotary Club, Lions Club, Kiwanis Club, National Exchange Club, National Progress Club, Realty Association, Business and Professional Woman's Club, Merchants' Association, Woman's Club, and League of Women Voters. The Country Club has a club house and golf course on a picturesque site a few miles from town overlooking the valley. There are in the city six banks, with assets of \$61,000,000, deposits of \$52,000,000, and average annual clearings of more than \$115,000,000; a thrift and finance bank, and five Building and Loan Associations, with total resources of nearly \$10,000,000.

Climate, Resources, Surrounding Country—For data as to climate see U. S. Weather Bureau Report, at the beginning of this booklet. It may be said here, however, that the climate at San Jose is generally recognized as unexcelled by that of any part of California, although being located in the lower portion of the valley and having an elevation of only 95 to 100 feet above sea level the atmosphere carries more moisture than that of the valley foothill sections, but it has 72 per cent of possible sunshine during the year, with 220 clear days and 73 of only partially cloudy days. The local climate, pure water supply from mountain reservoirs and deep artesian wells, and ample means of recreation and outdoor life are factors that make for health, as evidenced by a death rate of only 12.3 per 1,000 and a very low rate of infant mortality.

San Jose is surrounded by orchards of all kinds, in soils of deep loam, gravelly loam and productive adobe. The contiguous section is quite thickly settled, and new residence parks just outside the city are being opened up from time to time to accommodate the increasing population. Between San Jose and the bay are many pear and apple orchards, berry fields, commercial vegetable gardens, and small dairies, while east, south and west are chiefly prune, apricot and peach orchards.

SAN MARTIN—

San Martin, on the State highway and the line of the Southern Pacific, is 24 miles southeasterly from San Jose, between Morgan Hill and Gilroy; it has a school, a church and a number of business houses. It is comparatively a small district, but it has many vineyards and prune and peach orchards. The soil is chiefly a reddish clay loam, with some gravel in places; it is admirably adapted to the growing of grapes, and orchards do well on its best lands.

SANTA CLARA—

The first fruits grown in this valley were produced from trees planted by the Franciscan Fathers at the Mission of Santa Clara, which was founded in 1777, and to them must be given the credit of paving the way for the valley's present magnificent orchard industry. A town gradually grew up around the Mission, and today Santa Clara, three miles from San Jose, 45 miles from San Francisco, and only six

miles from the Bay, is a thriving city of homes and varied business establishments, besides being the seat of the University of Santa Clara, and it has a population of 6,000, which is steadily increasing. Water, gas and electric plants are owned by the city, the administration of which is characterized by a progressive spirit. In addition to the university, the old buildings of which soon will be torn down to be replaced with fine modern structures, there is a high school and grammar school, and the State Teachers College at San Jose and Stanford University at Palo Alto are easily available. All the leading churches, Catholic and Protestant, are represented by church edifices. The city has a municipal library, two banks and two newspapers, and an efficient fire department. It is on the main line of the Southern Pacific, and has good transportation facilities; the State highway passes through, and the city is connected with San Jose by a double-track electric line.

Industrially the city is important; among its local industries are extensive canneries and packing houses, a jelly-juice factory, green fruit packing house, largest planing mill on the Pacific Coast, dinnerware pottery, fruit and vegetable dessicating plant, the Walnut Growers' Association's packing house, a large evaporating plant, for apples and other fruits, a tannery, and a concrete pipe plant.

The district around Santa Clara is one of the most productive in the county. Miles of prune, apricot, peach, and pear orchards, in the different soils adapted to each; vegetable seed farms; berry farms and dairies, characterize this rich section. An adobe soil, much of it toward the lower lands covered with sediment, and lighter but productive soils to the west of the city, prevail throughout the district. Conditions are admirable for the poultry industry, and there are a number of poultry farms here. Fine roads run in all directions, and the canneries and packing houses right at hand and the splendid facilities for transportation combine to make marketing conditions for the fruit growers and farmers in the vicinity of Santa Clara unsurpassed. The rainfall is slightly greater than at San Jose, and the climate is similar.

SARATOGA—

In the warm belt of the Santa Cruz foothill section, nearly 11 miles southwest of San Jose, lies the fertile and scenically attractive Saratoga district, a favorite spot for the country homes of business and professional men in San Jose, and others, and highly favored by climatic conditions for a wide range of soil productions. The town itself, with its handsome residences and beautiful gardens, is known throughout the United States for its annual Blossom Festival, usually about the middle or latter part of March, when the entire valley, which it overlooks, is a wide and stretching sea of orchard blossoms. The town is on the Peninsula electric railway system and is the gateway to the State Redwood Park, one of the most remarkable forests in the world, with giant redwood trees, thousands of years old, predominating; paved roads connect it with all parts of the county. Its business houses cover many lines; a quarry of high-grade road rock near by is owned and operated by the county; it has several churches and an inn, and one mile from the town, up the canyon, is Congress Springs, locally notable for its fine table water, that flows from the springs, which are located amidst highly beautiful scenery. The Odd Fellows Home is located between Saratoga and Los Gatos.

The foothill soil is of a light red color and is not so productive as the valley soils, except in places where the mountain wash has covered the original soil with sediment, but being in the thermal belt, lemons, oranges, pomelos, avocados and other fruits that cannot stand the frost flourish in the home gardens, but are not grown on a commercial scale. The rainfall is fully twice that of San Jose. That portion of the district from the edge of the foothills gently sloping toward the valley floor is covered with thrifty prune, apricot and other orchards, and is very desirable for fruit growing, also for residential purposes. Here the orchards can be and are irrigated, but in the foothill section, because of the contour of the land, irrigation is impossible, except in a small way for home gardens and very small family orchards.

The demand for foothill homes at Saratoga will continue so long as sites are available, and the orchard section of the district will always be one of the most fruitful in the valley.

SUNNYVALE—

A combination of orchard and manufactural industries distinguishes the Sunnyvale district, the town itself being nine miles northwesterly from San Jose, on the main line of the Southern Pacific, and just off the State highway, 38 miles from San Francisco, and a few miles west of the bay. Less than three and a half miles from Mountain View, the town has steadily grown in industrial importance, and the former grain fields surrounding it are now largely in flourishing orchards. It is quite a shipping center, and in addition to railroad service Jagles Landing has for years afforded a water outlet for local products in small schooners. The slough that has been thus utilized has been dredged into a straight, wide and comparatively deep waterway by a local company, two miles to deep water in the bay, with an extensive turning basin, providing for the accommodation of bay, river and coastwise schooners and small steamers.

Among the industries in Sunnyvale are works for the manufacture of marine boilers, mining machinery, etc.; various factories for turning out motor trucks, camp and outing equipment, concrete pipes, silos, incubators, paints, and cots, assembling plant for tractor and gasoline engines, two lumber yards, two fruit canneries and a dried fruit packing house. The town has a weekly newspaper, a bank, a fine school building, a Chamber of Commerce, and the usual lines of business. It is both a manufacturing center and an important shipping point for the varied products of the district.

Surrounding Country—The soil is chiefly a rich adobe, in places covered with sediment, some a lighter clay; on the heavier soil pears, apples, berries, and tomatoes and other vegetables, are grown, while the lighter soils are devoted to cherries, apricots, prunes, and other fruits, and there are also alfalfa fields to some extent, and dairies. It is a productive district, and the local canneries, dryers and packing house and San Francisco and other bay cities and towns provide near-by markets for all products of the soil. The climate is agreeable; frosts occur in the lower section of the district near the bay, but in the western section the climate is similar to the best on the floor of the valley.

WRIGHT—

The picturesque town of Wright is located nine miles southerly from Los Gatos, on the Santa Cruz branch of the Southern Pacific,

and just below the summit of the Santa Cruz range; it has a store, hotel, blacksmith shop, postoffice and fruit packing house, and quite a number of permanent and summer residences scattered about in the canyon and on the mountain sides. Its natural surroundings are highly attractive with forests of redwood, oak and other timber, and the deep forest soil in the clearings is very rich. The district is notable for its fine table grapes, and it produces many prunes, also pears and apples, some cherries, and berries. In addition to the heavy winter rainfall, the Los Gatos creek runs through the district, in which also there are many mountain springs of the purest water.

SUMMER RESORTS

Because of the valley's pleasant climate, beautiful natural surroundings and excellent roads leading in all directions, every city, town and section from Palo Alto on the north to Gilroy on the south is desirable for summer residence by city-weary dwellers. For those who love the foothills and mountains with their wooded canyons and picturesque scenery, Los Altos, Saratoga, Congress Springs, Los Gatos and the entire western foothill section of the valley offer rest and quiet enjoyment. In the same mountains, in the vicinity of Los Gatos and of Alma, are several private resorts, and beyond the summit, in Santa Cruz county, easily and quickly reached over the paved branch State highway, are similar mountain resorts, and further down, the seaside resorts of Santa Cruz and Capitola, with their fine beaches and bathing facilities. In the Mt. Hamilton range, on the east, are the Gilroy Hot Springs, Madrone Springs, Smith Creek (at the base of Mt. Hamilton), and Alum Rock Park, just east of San Jose, a favorite spot for picnickers, with its natatorium, plunge, mineral waters, children's playground, and cafe. The State Redwood Park, in Santa Cruz County, reached by way of Saratoga and Congress Springs, draws thousands of people from all parts of the United States during the summer months.

GOVERNMENT LAND

On the authority of D. D. Tennyson, U. S. Land Office, there is no Government land in Santa Clara County that is worth taking up, nor has there been for many years. There is considerable such land in the Mt. Hamilton range, and a few scattered pieces in the Santa Cruz range, but it is all so rough and broken that it is fit only for grazing, and much of it not even for that.

NEWSPAPERS PUBLISHED IN SANTA CLARA COUNTY

Campbell Interurban Press, weekly	Santa Clara News, weekly
Gilroy Advocate, weekly	San Jose Mercury-Herald, daily
Gilroy Gazette, weekly	San Jose News, Evening, daily
Los Gatos Mail-News, weekly	San Jose The Pacific Grower, weekly
Mayfield News, weekly	San Jose Pacific Poultry Breeder and Fanciers' Monthly
Morgan Hill Times, weekly	San Jose The Post, weekly
Mountain View Register-Leader, weekly	San Jose La Sperza (Italian) weekly
Mountain View Sentinel, weekly	San Jose The Union, weekly
Mountain View Signs of the Times	San Jose Citizen, weekly
Palo Alto Times, daily	Saratoga The Star, weekly
Palo Alto Citizen, weekly	Sunnyvale The Standard, weekly
Santa Clara Journal, semi-weekly	

CIVIC ORGANIZATIONS

Alum Rock Improvement Club.....	San Jose
Alviso Improvement Club.....	Alviso
Berryessa Improvement Club.....	Berryessa
Burbank Improvement Club.....	San Jose
Campbell Board of Trade.....	Campbell
Cupertino Improvement Club.....	Cupertino
Evergreen Improvement Club.....	Evergreen
Gilroy Chamber of Commerce.....	Gilroy
Jackson Improvement Club.....	San Jose
Linda Vista Improvement Club.....	San Jose
Los Altos Improvement Association.....	Los Altos
Los Gatos Chamber of Commerce.....	Los Gatos
Mayfield Chamber of Commerce.....	Mayfield
Milpitas Chamber of Commerce.....	Milpitas
Morgan Hill Board of Trade.....	Morgan Hill
Mountain View Chamber of Commerce.....	Mountain View
Palo Alto Chamber of Commerce.....	Palo Alto
San Jose Chamber of Commerce.....	San Jose
San Martin Improvement Club.....	San Martin
Santa Clara Chamber of Commerce.....	Santa Clara
Saratoga Improvement Club.....	Saratoga
Sunnyvale Chamber of Commerce.....	Sunnyvale
Willow Glen Improvement Club.....	San Jose

SANTA CLARA COUNTY

AGRICULTURAL AND HORTICULTURAL SURVEY

Compiled and Revised by

SAN JOSE CHAMBER OF COMMERCE

for the

BOARD OF SUPERVISORS, SANTA CLARA COUNTY

INDEX

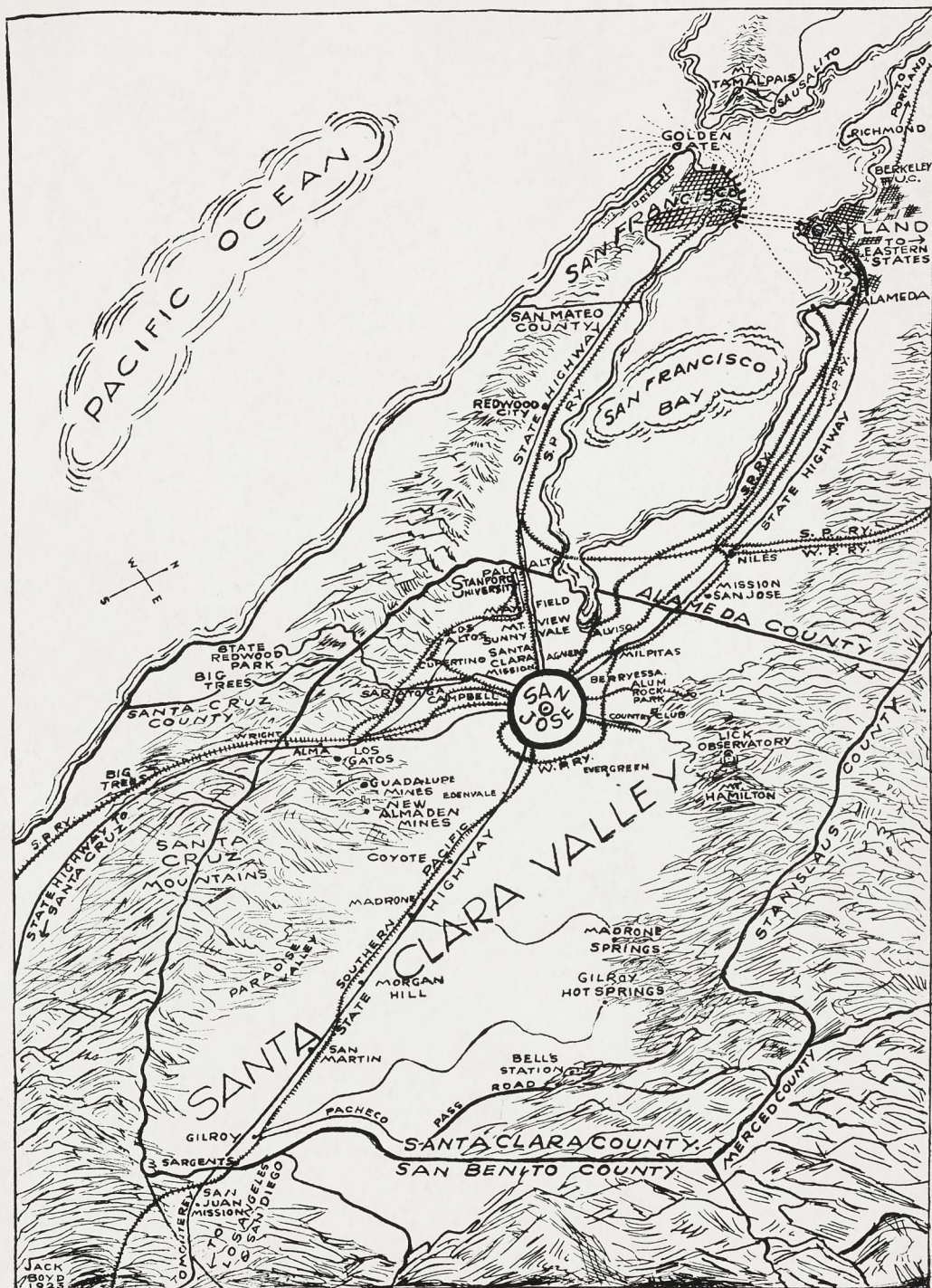
	Page		Page
General Information:		Cherries	21
Amusements	9	Citrus Fruits	23
Assessments, Taxation, etc.....	10	Grapes	24
Banks	11	Hay and Grain.....	25
Berry Production.....	15	Olives	25
Building and Loan Associations	11	Peaches	26
Churches	9	Pears	27
Civic Organizations	69	Prunes	29
Climate	3	Tomatoes (Canning)	32
Colleges, Universities.....	8	Vegetables (Early)	33
Education	7	Walnuts	34
Exportation of Fruits, etc.....	15		
Foreword	1		
Fraternalities	9		
Heat, Light, Power (Rates).....	11	Industries:	
Highways, Roads	6	Bees and Honey.....	35
Introduction	2	Canneries, List of	37
Irrigation	13	Canning Industry	36
Land (Government)	68	Cattle (Beef)	38
Land (Leases)	13	Cattle (Purebred)	38
Land (Prices of)	12	Chrome	50
Library, County	9	Dairying	39
Lick Observatory	8	Dried Fruit Packing Houses.....	41
Livestock, Number and Value of	14	Drying and Packing Industry....	40
Newspapers	68	Horses (Trotting, Running).....	42
Orchard Acreage, etc.	13	Industrial Data.....	49
Orchard Productions	14	Lumbering	43
Recreation	9	Magnesite, Manganese	50
Schools, Districts, Attendance....	7	Manufactories, List of.....	43
Social Activities	10	Manufacturing	43
Summer Resorts	68	Marble	50
Transportation	6	Mineral Resources	49
Vegetable Productions	15	Mineral Springs	50
Water Rates	12	Nursery Industry	51
		Oil	50
Crops:		Poultry	52
Alfalfa	15	Quicksilver	49
Almonds	16	Rock, Crushed	50
Apples	16	Seed Industry	54
Apricots	18	Stone (Building)	50
Berries	20		

INDEX—Continued

	Page		Page
Districts, Cities, Towns:		Linda Vista	59
Agnew	54	Los Altos	59
Alma	55	Los Gatos	59
Almaden ..	55	Madrone	62
Alta Mesa	55	Mayfield	60
Alviso	55	Meridian	60
Berryessa	56	Milpitas	61
Campbell	56	Monte Vista	62
Coyote	57	Morgan Hill	62
Cupertino	57	Mountain View	62
Eastern Foothills	57	Palo Alto	63
Edenvale	57	San Jose	64
Evergreen	58	San Martin	65
Gilroy	58	Santa Clara	65
Guadalupe	59	Saratoga	66
		Sunnyvale	67
		Wright	67

20-

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Map of the County of Santa Clara

Showing Cities and Towns. State Highways, Main Roads,
Railways and Electric Lines